The Syntax of Parenthetical Topics in English

Undergraduate Research Thesis

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1. Introduction[1]

This project investigates the structural representation of parentheticals in English, constructions which mark the topic of an utterance, and which exhibit some of the properties characteristic of parentheticals. For decades linguists have deliberated over the structural representation of parenthetical constructions. Parenthetical phrases' unrestricted distribution and sometimes extreme prosodic and semantic independence have led linguists to propose many novel theories for incorporating parentheticals into a modern grammar. Unfortunately, not only have these explanations often been cursory and vague, but parenthetical topics have not been addressed in previous studies. My analysis focuses on the controversial hypothesis of non-integration for the syntax of parentheticals, which holds that a parenthetical phrase is not connected at the structural level to the sentence that contains it.

In support of the unintegrated hypothesis, I propose a simple way to impose a linear order on phonological material from those structures which is consistent with parenthetical phrases' unrestricted distribution (section 4.1). One consequence of this proposal is the prediction that the introduction of focus can improve the acceptability of parentheticals. An online survey on Amazon's Mechanical Turk was implemented to test this prediction using parenthetical topics *speaking of* and *as for* (section 5). The results of this study bear on the syntax of parentheticals in general, and it may be possible to apply this analysis to other kinds of parentheticals, including nominal appositives, full clausal parentheticals, reporting verbs like *said*, among others, which could lead to a more general account of parentheticals in English, or even cross-linguistically.

The thesis is organized as follows: Section 2 introduces background on the notion of topic and parenthetical. 2.1 introduces the notion of topic and the topic-marking phrases *speaking of* and *as for*, and section 2.2 provides background on the syntactic properties of parentheticals and some of the proposals to account for those properties. Section 3 introduces the notion of syntactic non-integration. 3.1 discusses the advantages and drawbacks of a syntactically unintegrated approach to parentheticals, and 3.2 introduces some general background which is central to an unintegrated analysis of parentheticals. Section 4 outlines a

[1] Thank you to my advisors, Peter Culicover, Robert Levine, and Judith Tonhauser for guiding and supporting this project. Thank you also to Marie-Catherine de Marneffe for her help in designing and implementing the Mechanical Turk survey.

proposal for an unintegrated approach to parentheticals. 4.1 focuses on syntax-phonology considerations, and 4.2 details some observations on the interpretation of parenthetical topics. 4.3 introduces an empirical prediction of the proposal, which the experiment reported in section 5 was intended to test.

2. Parenthetical Topics

2.1. Background on topics

The grammatical notion of "topic" has become a point of linguistic inquiry over the life of the field, but the particular bounds of the class of topics vary depending on what the author investigating them understood them to be, and their intentions when invoking them. Topics are broadly, and somewhat vaguely, defined as the part of the sentence that the sentence is supposed to be about (Meinunger, 2000).

(1) a. As for **the battleship**, it was sunk in the South China Sea.
b. **A small fortune**, the entrepreneur made on a few wise investments.
c. **Arnold** was found sleeping in his basement.

The boldface phrases in the examples above represent typical topics. These are the central components of the sentence to which the other parts of the sentence apply.

Some diagnostic tests for identifying topic make use of several phrases in sentence-initial position which are thought to contain a topic, for example, *as for*, *speaking of*, and *what about* (Gundel, 1974). In the sentence "Speaking of the Americans, a number of them are thought to be unhappy," *speaking of* identifies the topic of the sentence, the Americans. These different phrases each identify topics with different properties. *Speaking of* fails to produce a felicitous sentence when used with a topic that has not been mentioned contextually recently; out of the blue, saying *speaking of* is an awkward construction. *As for* cannot be combined with a topic that is not contrastive (Roberts, 2009).

Another consideration in the realm of topics is their structural position. In linguistics, the strings of words that comprise a sentence are thought to be the product of an abstract hierarchical structure, often represented visually as a complex branching tree. It is assumed in most work on topics that they and, if applicable, their associated topic-marking phrases, are bound to particular

positions in syntactic structure. For example, the "Cartographic Project" in syntax, which attempts to identify and "map out" universal syntactic structures, places topic in a structural slot at the beginning of the sentence (Rizzi, 2004).

The topic-marking phrases *as for* and *speaking of* not only mark topic, but they are also parentheticals.[2] As 2 illustrates, *speaking of* can appear in a variety of positions throughout the sentence, and is therefore not tied to a particular structural position, a property characteristics of parenthetical phrases. The properties of parentheticals are reviewed in more detail in section 2.2 below.

(2) a. Speaking of the forum, one of the administrators stepped down.
b. A friend of mine, speaking of computers, is currently working on building his own.
c. Did you hear that, speaking of Halloween, trick-or-treat will be cancelled in this town?
d. They recalled, speaking of board games, that a new version of Monopoly had come out.

The notion of topic is not critical to the analysis of parentheticals topics *speaking of* and *as for* which follows. The notion is relevant because *speaking of* and *as for* are frequently used as diagnostic tests for topic, and there may be valuable insights to be gained from investigating the interaction of topic with the interpretation of utterances containing parenthetical topics. I leave that project to future research.

2.2. Background on parentheticals

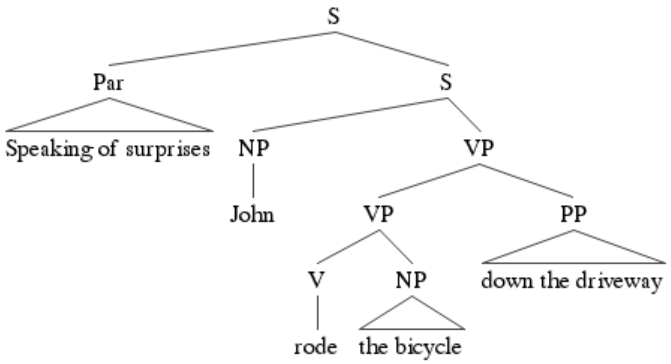
The term *parenthetical*, like *topic*, refers to a wide range of phenomena. They are identified by a perceived structural independence from a main utterance, and as having an interruptive effect within the sentence. There are several types of constructions identified as parentheticals, including nominal appositives (2a), reporting verbs like *said* (2b), and full clausal parentheticals (2c), among others (Dehé & Kavalova, 2007). The boldface phrases in the following examples constitute typical parentheticals.

(2) a. Don, **a friend of mine**, is the one you're looking for.
b. The demonstration was a waste of time, **said the chairperson**.
c. The number of participants is, **as you already know**, completely arbitrary.

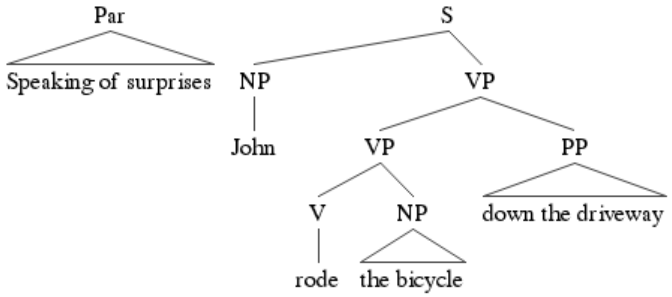
[2] I am not aware of any prior acknowledgement of *as for* and *speaking of* as parentheticals in the literature.

For decades linguists have been puzzled by the unusual properties of parentheticals, properties which are unexpected, especially from a syntactic perspective. For example, parentheticals, when examined carefully, have a virtually totally unrestricted distribution (Kaltenböck, 2007). That's unusual because most syntactic theory is based on the *restrictions* on certain words', phrases', or categories' distributions, where things can go vs. where they can't. Parentheticals also do not participate in the phrase-structure relation of c-command (see section 2.2.3). These unusual properties have led some linguists to conclude that parentheticals are syntactically independent in some way, though the interpretation of this notion varies wildly from proposal to proposal. Some argue that parentheticals are literally unconnected or "unintegrated" from the host sentence in which they appear (e.g. Burton-Roberts, 1999; Kaltenböck, 2007; Haegeman, 2009), while others claim that parentheticals are structurally integrated in a special way which gives rise to an illusion of independence (e.g. Emonds, 1976; McCawley, 1982; De Vries, 2007). 3 below illustrates the difference between the syntactically integrated and unintegrated approaches.

(3) a.



b.



3a is an example of a syntactically integrated representation of a parenthetical *speaking of surprises*, in which the parenthetical is treated as a constituent of the main sentence *John rode*

the bicycle down the driveway. 3b illustrates an unintegrated representation, in which the parenthetical is part of the syntactic representation of the utterance, but is not attached syntactically to the main sentence. The motivations for taking one or the other position are addressed below. Several different approaches to the syntax of parentheticals from a syntactically integrated perspective are discussed in section 2.2.4, and the unintegrated approach is discussed in 3.1.

Parentheticals are distinguished by a variety of linguistic features, including prosodic separation (Dehé, 2009), a tendency to address not-at-issue content (AnderBois et al, 2013) and various syntactic effects such as positional flexibility (Kaltenböck, 2007), invisibility to c-command (De Vries, 2007), and exemption from interpretation in ellipsis and other constituency tests (McCawley, 1982). These syntactic properties are most important in this project. These properties have led some linguists to hypothesize that the syntactic representation of parentheticals is unique in some way. For instance, De Vries takes the invisibility to c-command as evidence for an alternative instantiation of the operation *merge* (see section 2.2.4). Others like Burton-Roberts (1999) and Haegeman (2009) suggest that these facts indicate that parentheticals are syntactically unattached to the host sentence which contains them (see section 3.1). Both approaches have supporters and detractors.

In this section, I focus on the syntactic properties of parentheticals noted in the literature, and the proposals as to how to most adequately capture those properties in the syntactic representation postulated for parenthetical clauses. Three syntactic properties of parentheticals are reviewed below, *positional flexibility* (2.2.1), *failure in constituency tests* (2.2.2), and *invisibility to c-command* (2.2.3). Three proposals for the syntax of parentheticals from a syntactically integrated perspective are discussed in section 2.2.4. I conclude that, while current proposals for the syntax of parentheticals from a syntactically integrated perspective may succeed in accounting for one or more syntactic property of parentheticals, each proposal has a serious drawback which could be taken as grounds for adopting an alternative, such as a syntactically unintegrated proposal.

2.2.1. Positional Flexibility

The property of positional flexibility is one which is frequently mentioned as a property of parentheticals, but it is also frequently understated. At a glance, there are certain sentence-

medial "weak points" in the structure of sentences which open themselves up in some way to a parenthetical. In English, these positions appear to include between the subject and verb phrase and between adjuncts (Kaltenböck, 2007). Addressing the accessibility of these sentence-medial positions to parentheticals as "weak points" captures the restrictions on parentheticals' positional flexibility noted since Emonds (1979). Parentheticals cannot, for instance, intervene between the verb and its object. Emonds gives the following judgment:

(4) *John pushed, they claimed, a child into the street.

The above judgment, however, appears not to reflect a syntactic restriction, as was originally proposed by Emonds. In fact, the sentence above can be improved in a variety of ways, some of which are identified by Kaltenböck (2007). For example, the sentence can be improved by using a parenthetical phrase which draws the listener's attention to the bizarreness of John's pushing a child, as opposed to an adult.

(5) John pushed, and you're not going to believe this, a CHILD into the street.

For some speakers, the above example evokes prosodic focus on *a child,* a fact which is not noted by Kaltenböck. Below, I identify prosodic focus as a key factor in ameliorating judgments on sentence-medial parentheticals. The fact that the structural positions that seem not to accept parentheticals can be made acceptable with a variety of non-syntactic manipulations such as the one above indicate that the restrictions are not syntactic in nature. This lack of syntactic restrictions on parentheticals' distribution must be captured in an account of the syntax of parentheticals.

2.2.2. Failure in constituency tests

Parentheticals fail tests for constituency like VP ellipsis, and VP-pro-form replacement with relative pronouns like *which* and demonstrative pronouns like *that* (McCawley, 1982).[3] Parentheticals are not interpreted in VP ellipsis. In other words, a parenthetical which appears in the middle of a syntactic VP is not part of the interpretation of that VP under ellipsis. McCawley gives the following examples.

[3] The acceptability of McCawley's may apply only to a subclass of parentheticals. Jackendoff's (1972) distinction between the orientation of adverbials may be relevant. The parentheticals of McCawley's examples are all *speaker-oriented* parentheticals, as are parenthetical topics, and fail McCawley's tests. *Subject-oriented* parentheticals, like certain adverbs, though, do pass the test. For example, replacing *of course* with *stupidly* in 6b makes the sentence acceptable. This issue is discussed briefly at the end of section 4.2.

(6) a. John talked, of course, about politics, and Mary did too.
b. *John talked, of course, about politics, and Mary did, you'll be surprised to hear, about baseball.
c. John talked, of course, about politics, and Mary, you'll be surprised to hear, did too.

The semantic interpretation of such sentences, according to McCawley, does not include the parenthetical *of course* under VP deletion in the second clause, even though that phrase appears in the middle of the VP *talked about politics*. This is exemplified by 6c; the expression *you'll be surprised to hear* in the second clause seems to contradict the parenthetical in the main clause, *of course*. If *of course* were part of the ellipsed VP, then we might expect the expression *you'll be surprised to hear* to decrease acceptability in 6c, but, at least according to McCawley's judgments, that doesn't seem to be the case.

When a VP containing a parenthetical phrase is the antecedent for a pro-form, the parenthetical is not part of the interpretation. When the relative pronoun *which* is used to refer to a syntactic VP, if the VP antecedent appears with a phrase-medial parenthetical, that parenthetical is not part of the interpretation of the pronoun. McCawley gives the following examples.

(7) a. John talked to us, of course, about politics, which Mary did too.
b. *John talked to us, of course, about politics, which Mary did, as you might have guessed, about Baroque music.

The parenthetical *of course* in 7 does not count as part of the antecedent for the relative pronoun *which*. In other words, the interpretation of the second clause in 7a is "Mary talked about politics," not "Mary talked to us, of course, about politics." 7b demonstrates that the phrase *about politics* is included in the VP antecedent to *which*, because the utterance is ungrammatical when the prepositional phrase is changed. The exclusion of parentheticals from pro-form antecedents also applies to demonstrative pronouns *this* and *that*. The interpretation of the second clause in 8 is "Mary would never talk to us about politics," excluding the parenthetical from the antecedent VP, as in "Mary would never talk to us, of course, about politics."

(8) John talked to us, of course, about politics, but Mary would never do that.

The fact that parentheticals are not included in the interpretation of VP ellipsis and VP antecedents may be taken to indicate that the parenthetical is not actually part of the VP at the level of syntactic structure.

2.2.3. Invisibility to c-command

Parentheticals, especially parenthetical full clauses, are "invisible" to various effects associated with the syntactic relation of c-command. Mark de Vries (2007) identifies a number of syntactic effects related to c-command which parentheticals do not participate in. For example, syntactic constituents inside a parenthetical cannot be extracted by way of movement, like WH-movement in question formation.

(9) *What did the police, the commissioner suspected Hank stole _, search his house? (De Vries, 2007)

While a number of these effects can be explained without referring to the hypothesis that parentheticals are invisible in some way to the syntactic relation of c-command (for example, WH-movement is also barred from adjuncts, a constraint which could be invoked as an explanation for the impossibility of extracting from parentheticals as well), some can only be accounted for as a consequence of parentheticals' being invisible to c-command. According to De Vries, direct evidence of parentheticals' invisibility to c-command comes from the lack of quantifier binding into parentheticals, the lack of binding-condition-C effects in parentheticals, and the fact that parentheticals' force and mood is independent of those in the host sentence. The examples below, adapted from De Vries (2007), illustrate these key pieces of evidence.

(10) a. Nobody$_i$ claimed that he$_i$ was thinking about Hank.
b. *Nobody$_i$ was, he$_i$ claimed, thinking about Hank.

10b is an example of the lack of quantifier binding into parentheticals. Whereas in 10a the quantifier *nobody* binds the pronoun *he*, which it c-commands, it cannot do so for the pronoun in 10b. We would expect that the pronoun could be bound in the same way in 10b as it is in 10a if the quantifier c-commanded the parenthetical. De Vries claims that the only explanation for the unacceptability of 10b is that the parenthetical is invisible to c-command, thus excluding the possibility of *nobody* binding the pronoun in the parenthetical. Of course, it's

a conceptual possibility that some other explanation could be contrived, but the fact is that the parenthetical in 10a appears to be in a similar structural relationship to the quantifier as the relative clause is in 10b, and the main reason to posit that the structural relation is different is that the quantifier cannot bind the pronoun.

(11) a. *She$_i$ said that Jane$_i$ was listening to music.
b. She$_i$ said, and this is typical for Jane$_{i,}$, that she$_i$ was listening to music.

Were the parenthetical *and this is typical for Jane* c-commanded by the pronoun *she* in 11b, then we would predict ungrammaticality on the basis of condition C of the binding theory, which states that pronouns cannot c-command antecedents. Unless some special property of parentheticals is postulated which excludes them from condition C effects, the only plausible explanation for the lack of condition C effects is that parenthetical phrases are not subject to the syntactic relation of c-command.

(12) a. Jake said (why am I not surprised?) that he hates bicycles.
b. Does Jake, who I met last week, own a car?
c. Does Jake, I think you've met Jake, own a car?
d. Jake probably said that Mary, she's my sister, took a few days off.

The sentences in 12a and 12b are illustrations of the independence of parenthetical phrases' illocutionary force. In 12a, the parenthetical is interrogative, while the host sentence is declarative. The opposite is taken to be the case in 12b, though in 12b what is taken to be a parenthetical is a non-restrictive relative clause, and despite the initial appeal of treating non-restrictive relative clauses that way, there is doubt that they are really parentheticals (Arnold, 2005). Nevertheless, 12c is a more straightforward case of a declarative parenthetical within an interrogative host. The interpretation of 12d, according to De Vries, is that what is probable is the proposition that *John said Mary took a few days off*. The fact that the parenthetical is not included in the interpretation of what is probable is an indication that the parenthetical has an independent mood from the host sentence, as the semantic material associated with the parenthetical does not fall under the scope of the modal operator in the host sentence *probably*.

2.2.4. Syntactically Integrated Hypotheses

The syntactic properties of parentheticals such as those noted above are all indicative of a lack of syntactic connection to the host sentence. This lack of syntactic connection has prompted linguists to make different hypotheses as to the syntactic representation responsible for such effects. The representation posited for parentheticals must somehow account for their positional flexibility, their failure in constituency tests, and their invisibility to c-command. There are two main approaches to this problem. One is the syntactically unintegrated approach, which simply states that parentheticals, in their syntactic representation, are unconnected, or unattached to the main sentence. This view accounts straightforwardly for the syntactic properties of parentheticals, but it suffers from two problems. The first issue with this approach is that the semantic interpretation of complex linguistic signs is generally attributed to the syntactic relations between their internal elements. If parentheticals are syntactically unconnected to the main sentence, then there must be an explanation for their interpretation compositionally with the main sentence which does not invoke syntactic relations. The second problem with the unintegrated approach, and the one that is considered most serious by some (e.g. Dehe & Kavalova, 2007), is the phonological production of such configurations. I address both these dilemmas in later sections, demonstrating that they are not as detrimental to the unintegrated approach as it may at first seem.

The alternative to the unintegrated approach to the syntax of parenthetical phrases is one which holds that parentheticals are syntactically integrated, but in a special way so as to avoid being subject to the syntactic relations mentioned above. For instance, one of the earliest syntactically integrated approaches treated sentences containing parentheticals as transformations on root sentences with parentheticals in final position (see the following paragraph). More modern proposals make reference to multi-dimensional syntax to avoid particularly the syntactic relation of c-command. Below I review several proposals which take an integrated approach to the syntax of parentheticals.

One of the first sources on the syntax of parentheticals comes from Joseph Emonds (1976). Emonds bases his proposal for the syntax of parentheticals on some observations of the restrictions on parentheticals' distribution. The general restriction that Emonds identifies is that parentheticals do not intervene between syntactic constituents. Emonds took this fact to mean

that parentheticals appearing in sentence-medial positions are structural transformations on sentences with parentheticals in final position. However, in order to account for the diversity of phrasal categories included in the class of parentheticals, from one-word parentheticals to full-clausal parentheticals, Emonds posits an additional structural node E which is above the level of S. Though the proposal captures the restrictions on parentheticals' positional flexibility, it does not take into account the invisibility to c-command or failure in constituency tests, which are not negligible properties of parentheticals.

A later proposal due to McCawley (1982) uses the notion of discontinuous structure to account for the syntactic property of parentheticals which excludes them from interpretation in various constituency tests such as ellipsis.[4] McCawley's proposal specifically seeks to address the distributional properties observed by Emonds (1976) without positing structural changes which are inconsistent with observations of parentheticals' failure in various constituency tests like ellipsis. Instead of positing transformational rules which produce sentences with parentheticals in medial positions, McCawley suggests that there may be various rules of "Parenthetical Placement" which determine where in the linear order of the host sentence the parenthetical appears without changing constituent structure, and he suggests that these rules have a "stylistic" rather than syntactic function. However, McCawley gives this possibility only as a suggestion, and notes that the proposal would have to be made more precise before it could be seriously considered. McCawley's proposal contains a straightforward structural description of the syntactic representation of parentheticals which accounts for their failure in constituency tests. Unfortunately though, without a concrete proposal for the linearization of parenthetical phrases, McCawley's proposal lacks an explanation for the restrictions on parenthetical placement observed by Emonds.

Another proposal of the syntactically-integrated variety is Mark de Vries' (2007) characterization of parentheticals as "b-merged constituents." De Vries focuses on an array of data from English and Dutch which indicate that parentheticals are invisible to c-command effects, and though it might be simple to account for these facts by postulating a lack of syntactic attachment between the parenthetical and the host sentence, De Vries rejects the unintegrated analysis. The problem De Vries finds with the unintegrated approach to the syntactic

[4] A similar approach is taken in Peterson (1999), who relies on the same evidence from VP ellipsis.

representation of parentheticals is that, though parentheticals do not participate in phrase-structure relations as one might expect of any other normal syntactic constituent, they do appear in the linear order of sentences. This is a problem which is usually breezed over by the proponents of an unintegrated approach, but it is a serious problem; phonological properties such as word order and prosodic structure are derived from the syntax on standard approaches. One of the goals of syntactic hypotheses is to provide an explanation for the relation between the complex phonological and semantic form of a relevant class of utterances. I provide a more thorough description of this problem later when I describe my proposal.

After laying out the evidence, De Vries composes a precise solution to the problem. He hypothesizes an alternate instantiation of the fundamental operation Merge, postulating a dichotomy between a structure-building operation which includes the relation of c-command, *d-merge*, and one which specifically excludes it, *b-merge*. The only difference between *b-merge* and regular "d-merge" is that *b-merge* creates structures which do not implicate constituents in c-command. *B-merge* would solve the problem of parentheticals' invisibility to c-command without resorting to an unintegrated configuration, but there are two problems with the hypothesis. For one, the distribution of parenthetical phrases (i.e. their positional flexibility) is not addressed by this hypothesis. It is not clear whether it is a property of *b-merge* that it can apply at certain points in a d-merged structure, or if there a special property of *b-merge* which interacts with the linearization of b-merged constituents.

The other problem is that this proposal is an ad hoc one. In essence, the explanation De Vries proposes for the syntactic properties of parentheticals is that, alongside the standard structure-building operation (*d-*)*Merge*, there is a structure-building operation *b-merge* which gives constituents those properties. There is no benefit in postulating a structure-building operation which effectively produces syntactically independent structures, when it provides no way of predicting the restrictions on word order. It appears that the only advantage that the b-merge hypothesis has over the hypothesis of syntactic non-integration is that it provides a way to interpret and produce parentheticals. However, it is not necessarily the case that semantic interpretation and prosodic form cannot be derived from unintegrated structures, as I discuss in the following section.

2.2.5. Syntactically Integrated Parentheticals Summary

The section above includes some background on key properties of parenthetical phrases identified in the literature. Parentheticals can be identified by a number of features, including prosodic and semantic/pragmatic features, but here I focus on the syntactic properties of parentheticals such as their positional flexibility (section 2.2.1), failure in constituency tests (section 2.2.2), and invisibility to c-command (section 2.2.3). These properties all suggest that the syntax of parentheticals involves some kind of syntactic independence, which different authors have instantiated formally in a number of different ways. Three prominent proposals are discussed in 2.2.4 above. While each proposal provides a way to account for one or more of parentheticals' syntactic properties, no proposal captures all the properties in a satisfactory way. De Vries's proposal for example accounts for parentheticals' properties by simply positing a structure building operation which attributes those properties to constituents. In the sections below, I provide some background on approaches to the syntax of parentheticals from an unintegrated perspective.

3. Syntactic Non-Integration

In this section, I review the notion of syntactic non-integration. In section 3.1 I review the stance of two proponents of the syntactically unintegrated approach to the syntax of parentheticals. The unintegrated approach can capture the syntactic properties of parentheticals in a simple way. The idea is that the unusual, and especially the syntactic, properties of parentheticals are direct consequences of their syntactic non-integration. However, the unintegrated approach suffers from a different problem, which is that it proposes a configuration for which it is not clear how it interacts with syntax-semantics and syntax-phonology interfaces. Section 3.2 introduces some considerations and background necessary in proposing a solution to the problem of deriving a phonological form from syntactically unintegrated structures.

3.1. Background on unintegrated proposals

Based on the same data illustrating the surprising syntactic properties characteristic of parentheticals which I outlined above, some linguists make the claim that parentheticals are literally unattached syntactically (Dehé & Kavalova, 2007). This extremely odd proposition ought to warrant a detailed, formal elucidation, yet the proponents of the concept have

consistently failed to provide one (e.g. Burton-Roberts, 1999; Kaltenböck, 2007; Haegeman, 2009). The problems with the unintegrated approach are not trivial, and for this reason, some linguists reject the syntactic non-integration hypothesis, instead taking the appearance of syntactic un-connectedness to indicate that the forces of syntax are at work in mysterious ways. In this case, for example the three proposals mentioned above (Emonds, 1976; McCawley, 1982; De Vries, 2007), we find clear proposals such as those in section 2.2.4, but these proposals unfortunately all miss crucial syntactic properties characteristic of parentheticals. None of the proposals I mentioned take into account the phenomenon of ameliorating focus, which I describe below.

The syntactically unintegrated approach holds that the properties of parentheticals, including the syntactic properties of positional flexibility, failure in constituency tests, and invisibility to c-command, are direct consequences of the syntactic independence of parentheticals (Kaltenböck, 2007). For example, the unintegrated approach accounts for parentheticals' failure in constituency tests, because the parenthetical is not a constituent of any part of the main sentence. Parentheticals are necessarily "invisible" to c-command, because they are not c-commanded by any syntactic node in the host. It has also been suggested that parentheticals' positional flexibility is a direct consequence of syntactic non-integration (Kaltenböck, 2007). I elaborate on why that might be the case in section 4.1.

There are two main objections to the unintegrated approach, namely how to derive the semantic interpretation of unintegrated structures, and the phonological production of such configurations. If parentheticals are indeed syntactically unconnected to the host sentence containing them, then it must be possible to derive a semantic interpretation and a phonological form from such configurations without relying on syntactic relations. As far as the semantic interpretation is concerned, it has long been proposed that the semantic interpretation may be derived simply from general principles of utterance interpretation, principles which are independent of syntax entirely (Burton-Roberts, 1999; Asher, 2000; Haegeman, 2009).

The phonological production of parentheticals is another story. The linear ordering of constituents in the phrase-structure tree for a given sentence is generally assumed to be derived from the syntactic structure of that tree (e.g. Kayne, 1994). This is the general assumption in the syntactically integrated proposals described above. The proposals as to just how the linear order

is derived are quite varied, yet they all seem to agree on this fundamental property. This property is, in effect, a conceptual necessity for the formulation of syntax which modern linguistics has to offer; from categorial grammar to bare phrase structure grammar, syntax mediates between complex semantic and phonological form. The problem for a syntactically unintegrated treatment of parentheticals is that such an approach provides no way to derive a linear ordering of a syntactically unconnected constituent. Influential proposals like Haegeman (2009) have acknowledged this problem without providing a serious solution, perhaps because the severity of the problem was not recognized by the researchers.

One of the first proposals on the unintegrated approach to the syntax of parenthetical clauses is due to Lilliane Haegeman (2009),[5] in which the "Radical Orphanage Approach" to the syntax of non-restrictive relative clauses was proposed. The proposal is based on data indicating the syntactic effects mentioned above; non-restrictive relatives are not interpreted under ellipsis, and they seem to be invisible to c-command effects. The solution Haegeman proposes is to take non-restrictive relative clauses to be totally unconnected to the host sentence. Haegeman acknowledges the problem for the semantic interpretation and phonological production of such a configuration; for the semantic interpretation, she notes that the representation is the same as for independent sentences, and thus suggests that general principles of utterance interpretation may naturally be able to account for the compositional meaning of non-restrictive relatives. As for the phonological problem, unfortunately Haegeman does not adequately address it. In effect, her solution to that issue is to say that the configuration must be linearized in some way, and that's it.

The issues of the semantic interpretation and phonological production of unintegrated configurations is addressed also in Burton-Roberts (1999). On the problem of the semantic interpretation, Burton-Roberts effectively takes the same stance as Haegeman; that is, the semantic interpretation can be derived from the general principles that allow compositional interpretation across independent sentences. The issue of the phonological production of unintegrated syntactic structures is addressed by Burton-Roberts, who comes to a similar conclusion as Haegeman. In Burton-Roberts's words, parentheticals "don't need, and could not,

[5] The reference cited here for Haegeman's proposal is a republishing from 2009. That is because earlier publishings (there are at least two, one from 1988 and one from 1991, which I have seen cited) are highly elusive.

'be linearized' in utterance… They just are linear – as linear as [a] canvas is flat," (Burton-Roberts, 1999, p.48).

In this section (3.1), I have concluded that the proponents of a syntactically unintegrated approach to parentheticals have not provided an adequate analysis of the syntax of parentheticals. Though unintegrated approaches can straightforwardly account for the syntactic properties of parentheticals, and non-syntactic principles of utterance interpretation may suffice to account for unintegrated parentheticals' interpretation, syntactically unintegrated proposals suffer from the problem of phonological production. If parentheticals are not syntactically connected to the main sentence, then the linear position of the parenthetical cannot be determined by structural relations, as normally integrated constituents are linearized. In the following section I introduce some general background assumptions necessary for the proposal to follow in section 4.

3.2. Representation of Syntactic Non-Integration

This section presents some background crucial to a syntactically unintegrated account of parentheticals. Sentences are generally represented by tree or tree-like structures. However, unintegrated structures are not trees; they are sets of trees, or forests. I describe the formal representation of such structures in section 3.2.1.

Syntactic structures mediate between complex phonological and semantic forms. There are rules and constraints on how to compose words to form complex meanings from these structures. There may be syntactic constraints which, for example, impose limits on what can be the target of extraction, like island constraints. There may be semantic constraints which restrict the acceptability of utterances with conditions on factors like felicity. Phonological constraints limit acceptable prosodic structure based on syntactic structure; for example the phonological constraint Wrap-XP requires that every syntactic XP be contained within a phonological phrase (Truckenbrodt, 2007). Some important phonological constraints describing prosodic structure are listed in section 3.2.2.

The constraints of section 3.2.2 apply to tree structures, but unintegrated structures are forests, not trees, which means that the constraints of 3.2.2 cannot apply as-is to unintegrated structures. I introduce some considerations in obtaining a prosodic form from a syntactically unintegrated structure in section 3.2.3.

3.2.1. Trees

A syntactically unintegrated structure is a set of trees, or a forest configuration. In general, trees are *acyclic connected graphs*, meaning that there is exactly one path from one point on the graph to another. The trees used in syntax are *rooted* or *directed* graphs, graphs which can be defined as consisting of a set of edges and a set of nodes, where one of the nodes is the root. The edges or *branches* of a tree are ordered pairs connecting two nodes. A node is a point at the end of an edge on a tree; every edge has one node on each end. All trees have two types of nodes, or *vertices*: *terminal nodes* and *nonterminal nodes*. A terminal node, also referred to as a *leaf node,* is simply a node with no daughters (Nichols & Warnow, 2008). The leaf nodes are particularly relevant to a study of syntax trees, because the leaves of a syntax tree correspond to the individual words observed in language utterances. The nonterminal nodes are labeled with the names of phrase categories.

3.2.2. Syntax-Phonology

In this proposal, I make reference to the *linear order* of leaf nodes in syntactically unintegrated configurations. LIN_G is a linear order on the leaves of a tree G if it is the set of leaf nodes V_L paired with a binary relation that is transitive, antisymmetric, and total. This order corresponds to the linear order of words in the phonological form of the sentence. I use angled brackets to indicate the linear order of nodes. For instance, if we had a linear ordering on three nodes A, B, and C, where A precedes B, B precedes C, and A precedes C, I would write that as ⟨A, B, C⟩.

Linguistic utterances are composed of structures not only at the level of syntax, but also at the phonological or prosodic level. Syntactic structures correspond to structures at the prosodic level, called *phonological* or *p-phrases*. A number of these phonological constraints are relevant to this structure. These are the following (from Truckenbrodt, 1999).

(13) a. Align-XP,R: The right edge of each syntactic XP is aligned with the right edge of a p-phrase.

b. Align-XP,L: The left edge of each syntactic XP is aligned with the left edge of a p-phrase.

c. Wrap-XP: For each XP there must be a p-phrase that contains the XP.

The constraints in 13 are responsible for the mapping from syntactic to prosodic structure. Different languages might have these constraints ranked differently, which could result in different effects in mapping from syntactic to prosodic structure. For instance, an English sentence with the structure in 14a would have the corresponding p-phrasing in 14b.

(14) a. [$_{NP}$ John] [$_{VP}$ bought ice cream] [$_{PP}$ on Friday]
b. (John) (bought ice cream) (on Friday)

(15) Align-Foc: Each focused constituent is aligned with the edge of a p-phrase.

This constraint results in a phonological phrase around focused constituents. For instance, if the verb *bought* were focused in 14a as it is in 16a, the corresponding p-phrasing would correspond to 16b.

(16) a. [$_{NP}$ John] [$_{VP}$ BOUGHT ice cream] [$_{PP}$ on Friday]
b. (John) (BOUGHT) (ice cream) (on Friday)

(17) NonRecursivity: No [phonological] constituent of level *l* is contained in another constituent of level *l*. (Example: no [p-phrase] is contained in another [p-phrase].)

While at the level of syntax, structures are frequently embedded in multiple layers of structure, phonological phrases generally go only one level deep. In other words, there are no p-phrases embedded within p-phrases, even though syntactic XPs may be fully contained in other XPs.

3.2.3. Sequence Union

The constraints in section 3.2.2 are defined for connected tree structures, not for unintegrated trees. This poses a problem for an unintegrated syntactic representation of parentheticals, because the constraints above cannot be applied to unintegrated structures. The principles that derive linear order from syntactic structure and constraints mapping syntactic structure to phonological structure could apply to each tree in the forest representation independently, but even if a linear order could be derived for each tree independently, there would not be a linear order on the whole representation. Instead, there would be independent linear orders, one corresponding to each tree in the representation. In order to arrive at a linear

order on the entire representation, a *conceivable order* would have to be imposed on the yet unordered elements. This is described in more detail below, and in section 4.1.

I use the term "conceivable order" to refer to a shuffling of two independently ordered lists X and Y, where the new ordering preserves original orders of X and Y. In other words, since X and Y are already ordered independently, but not with respect to each other, a "conceivable order" is one that only additionally orders every element of X with every element of Y, without changing the order between any two elements of X or any two elements of Y. The set of conceivable orders could be said to be a filter on the permutations of the elements of X and Y. The set of conceivable orders is further constrained by conditions of well-formedness of phonological structure. The notion of a "conceivable order" is similar to the orders produced by the shuffle operation familiar to the linearization approach to word order in HPSG. In this case, the conceivable orders are obtained by applying a shuffle-like operation to the ordered leaves of independent trees, and filtering out those that are phonologically ill-formed.

The "shuffle operation" refers to the sequence union operator defined by Michael Reape (1993). Sequence union is defined formally as follows, as a relation on lists, where $\otimes$ is the sequence union operator, ξ is the empty list, $\oplus$ is list append, X, Y, and Z are arbitrary lists, and φ is an arbitrary string.

(18) a. $\otimes(\xi, \xi, \xi)$

b. $\otimes(X, Y, Z) \rightarrow \otimes(\langle\varphi\rangle\oplus X, Y, \langle\varphi\rangle\oplus Z)$

c. $\otimes(X, Y, Z) \rightarrow \otimes(X, \langle\varphi\rangle\oplus Y, \langle\varphi\rangle\oplus Z)$

Item 18a states that the sequence union of ξ with ξ is ξ. Items 18b and 18c state that, if the sequence union of two arbitrary lists X and Y is Z, then the sequence union of X and Y with X appended with an arbitrary string or Y appended with an arbitrary string will be Z appended with an arbitrary string. With 18a as a first step, the sequence union of lists of arbitrary length can be deduced by 18b and 18c. For example, $\otimes(\langle a\rangle,\langle b\rangle)$ could be deduced starting with point 18a above:

(19) a. $\otimes(\xi, \xi, \xi)$ by 18a

b. $\otimes(\xi, \xi, \xi) \rightarrow \otimes(\langle a\rangle\oplus\xi, \xi, \langle a\rangle\oplus\xi)$ by 18b

c. $\otimes(\langle a\rangle\oplus\xi, \xi, \langle a\rangle\oplus\xi) \rightarrow \otimes(\langle a\rangle\oplus\xi, \langle b\rangle\oplus\xi, \langle b\rangle\oplus(\langle a\rangle\oplus\xi))$ by 18c

19c could be rewritten less opaquely as $\otimes(\langle a\rangle, \xi, \langle a\rangle) \rightarrow \otimes(\langle a\rangle, \langle b\rangle, \langle b\rangle \oplus \langle a\rangle)$, indicating that the sequence union of the lists ⟨a⟩ and ⟨b⟩ is the list ⟨b, a⟩. However, the order of application of steps 18b and 18c could be reversed to give the following derivation:

(20) a. $\otimes(\xi, \xi, \xi)$ by 18a

b. $\otimes(\xi, \xi, \xi) \rightarrow \otimes(\xi, \langle b\rangle \oplus \xi, \langle b\rangle \oplus \xi)$ by 18c

c. $\otimes(\xi, \langle b\rangle \oplus \xi, \langle b\rangle \oplus \xi) \rightarrow \otimes(\langle a\rangle \oplus \xi, \langle b\rangle \oplus \xi, \langle a\rangle \oplus (\langle b\rangle \oplus \xi))$ by 18b

20c more clearly here would be $\otimes(\xi, \langle b\rangle, \langle b\rangle) \rightarrow \otimes(\langle a\rangle, \langle b\rangle, \langle a\rangle \oplus \langle b\rangle)$. In other words, the sequence union of ⟨a⟩ and ⟨b⟩ is ⟨a, b⟩. The sequence union of ⟨a⟩ and ⟨b⟩ could be informally written as $\otimes(\langle a\rangle, \langle b\rangle) = \langle a, b\rangle, \langle b, a\rangle$ (Daniels, 2005). For longer lists, the same steps can be used to deduce possible orderings. For example, the sequence union of ⟨a, b⟩ and ⟨c⟩ could be ⟨a, b, c⟩, ⟨a, c, b⟩, or ⟨c, a, b⟩. ⟨a, b⟩ shuffled with ⟨c, d⟩ would be ⟨a, b, c, d⟩, ⟨a, c, b, d⟩, ⟨a, c, d, b⟩, ⟨c, a, b, d⟩, ⟨c, a, d, b⟩, and ⟨c, d, a, b⟩. Essentially, the elements of each list can be shuffled in an arbitrary order, but they will always preserve the order of their original list.

4. Consequences of Syntactic Non-Integration

This section outlines the consequences of a syntactically unintegrated approach to parentheticals. Section 4.1 includes a discussion of some considerations in deriving a phonological form from unintegrated structures, followed by a series of examples illustrating how the proposal applies to increasingly complex structures. Section 4.2 introduces some observations on the interpretation of parenthetical topics *speaking of* and *as for*, ending with the conclusion that the interpretation of parenthetical topics depends on pragmatic factors. Section 4.3 describes an empirical prediction based on the proposal for phonological production in 4.1.

4.1. Phonology/Linear order

4.1.1. Deriving Linear Order from an Unintegrated Structure

Say we have two trees, H(ost) and P(arenthetical). Is it possible that the elements of P could appear exactly in order right between any two adjacent elements of H? It is possible if we make several plausible assumptions. First, we have to assume that such a configuration can be produced at all. Of course, if it were impossible to do so, we would have to abandon the unintegrated hypothesis for the syntax of parentheticals, or at least the version of it that takes the syntactic representation of parentheticals in a host to be that of a forest. However, to claim that it

is impossible to phonologically produce the proposed configuration is just as much of a stipulation as the assumption that the configuration can be produced. I assume here that it is possible to derive a phonological form from a forest in order to show that the minimal assumptions required to do so are surprisingly consistent with the distribution of parenthetical topics.

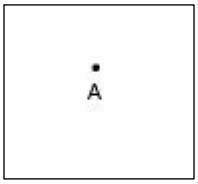
Assuming that a forest configuration can be produced phonologically immediately raises the question of how that could be done. As currently conceived, procedures that mediate between syntactic structure and phonological form operate on connected, not discontinuous, structures. I make the minimal assumption that, when operating on unintegrated syntactic structures, the procedures at play operate on each tree in the forest configuration individually. Under that assumption, phonological forms can be derived for H and P separately. Under this assumption, if the phonological form of H would be (φ_1 φ_2 φ_3) individually, and P would be (φ_4 φ_5), then those forms can both be derived from a forest configuration. This seems to be a quite straightforward assumption to make; if a phonological form can be derived from a structure on its own, then the same form can be derived from the same structure if it happens to be next to another unintegrated structure. Deriving phonological forms in this way does not require unconnected syntactic structures to be integrated.

The phonological forms above include phonological structure, linear orders of the words they contain, and their phonological phrasing. It is not unreasonable to assume that, having access to the linear orders of each tree individually, the procedures that produce a phonological form for the entire configuration have access to the *conceivable orders* of the leaves of both trees. That is, the sequence union of the two lists of leaves. Finally, if we assume that any phonologically well-formed conceivable order is acceptable, then we have the correct distribution for parentheticals, or at least the class of parentheticals that includes parenthetical topics.

The phonological procedure for an unintegrated syntactic structure proceeds as follows: i) determine the linear orders and phonological forms of each tree individually, ii) determine the conceivable orders of the leaves of each tree together, iii) accept those orders that are compatible with well-formed phonological structure and are consistent with the phonological structure of H and P individually.

This procedure involves phonological integration, but it derives the relevant phonological forms from unintegrated syntactic structures. In order to illustrate this, I consider the production of simple to increasingly complex forest configurations, starting with simple trees (a tree being minimally an acyclic directed graph G=(V, E, R) where V is the set of vertices/nodes, E is the set of edges/branches, and R is the root).

(21) Case 0



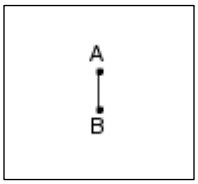
a. H=({A},{},{A})

b. LIN_H=⟨A⟩

c. $phon_H$=(A)

This is the simplest possible tree (a degenerate tree) besides the trivial case in which there are no nodes or branches at all. 21a indicates that there is exactly one node and zero branches in the depicted tree. There have been a number of proposals as to how syntactic structures are linearized; one possibility is that there is a precedence relation built in to the structure, another is that the order can be derived from the asymmetric c-command relation of the tree. In this case, I assume that the linearization of this tree LIN_H is A (or more precisely, the phonological material associated with the syntactic label A) as indicated in 21b, without making any assumptions as to how we arrived at that order. 21c indicates that the prosodic phrasing is (A), with phonological phrase boundaries indicated by parentheses.

(22) Case 1



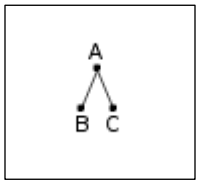
a. H=({A,B},{(A,B)},{A})

b. LIN_H=⟨B⟩

c. $phon_H$=(B)

This is the next simplest tree. In this case, there are two nodes, A and B, one branch A,B, and the root is A. I assume that the linearization of this tree is B, in line with the assumption that the only nodes we care to linearize are the terminals, again without locking in on any specific proposal for how to arrive at that order, aside from assuming that the order is somehow related to the tree structure.

(23) Case 2



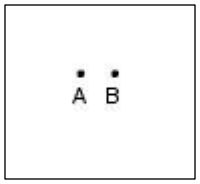
a. H=({A,B,C},{(A,B),(A,C)},{A})

b. LIN_H=⟨B, C⟩

c. $phon_H$=(B C)

Consider 23, which is an example of a simple binary tree. I assume that the linearization of this tree is either ⟨B, C⟩ or ⟨C, B⟩, the only two possibilities, and it doesn't matter what method was used to obtain that order. We can assume arbitrarily for the purposes of this study that the order ⟨B, C⟩ in 23b is appropriate. As for the phonological structure, according to constraints on phonological phrasing, (B C) is acceptable.

(24) Case 3



a. $S=\begin{Bmatrix} H = (\{A\},\{\},\{A\}) \\ P = (\{B\},\{\},\{B\}) \end{Bmatrix}$

b. i. LIN_H = ⟨A⟩, $phon_H$=(A)

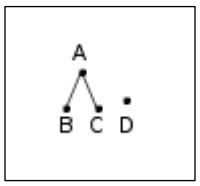
ii. LIN_P = ⟨B⟩, $phon_P$=(B)

c. LIN= ⟨A, B⟩ and ⟨B, A⟩

d. phon=(A)(B) or (B)(A)

24 is an example of the simplest forest representation I can think of, apart from one which has either only one or no trees in it. In this case, the phonological production proceeds as follows: i) derive phonological forms for each tree in S individually, ii) determine the conceivable orders LIN of the leaves in H and P, iii) accept the orders that are phonologically well-formed. Here, the host structure is a tree consisting of one node A, and the parenthetical is one node B. The individual linear orders of H and P are straightforwardly A and B respectively, and the phonological structures are (A) and (B). Therefore, the conceivable orders are ⟨A, B⟩ and ⟨B, A⟩, and both forms are acceptable because they are phonologically well-formed, corresponding to (A)(B) or (B)(A) respectively. This simple procedure does not require that the syntactic structures involved be integrated. Instead, the phonological forms obtained from each syntactic tree are integrated.

(25) Case 4



a. S= $\begin{Bmatrix} H = (\{A, B, C\}, \{(A, B), (A, C)\}, \{A\}) \\ P = (\{D\}, \{\}, \{D\}) \end{Bmatrix}$

b. i. LIN_H=⟨B, C⟩, $phon_H$=(B C)

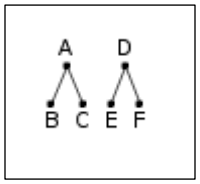
ii. LIN_P = ⟨D⟩, $phon_P$=(D)

c. LIN= ⟨B, C, D⟩, ⟨B, D, C⟩, and ⟨D, B, C⟩

d. phon=(D)(B C) or (B C)(D)

25 is an example of a more complex host structure with a simple parenthetical. I assume that the appropriate linearization of the tree H is ⟨B, C⟩ as in 23. That makes the conceivable orders of H and P those listed in 25c, and the phonologically well-formed conceivable orders those listed in 25d. The order ⟨B, D, C⟩ is not acceptable because the phonological structure associated with it is not possible. Phonological phrasing requires p-phrase boundaries to be placed according to the syntactic structure, which means that p-phrases cannot be adjusted after being derived without additional stipulations. The order ⟨B, D, C⟩ requires the phrasing (B (D) C), which is incompatible with the phonological structure derived from H and P individually. $Phon_H$ is a phonological phrase (B C), but inserting D in between B and C in the linear order would result in (B C) containing an additional element, which is not possible if the phonological phrasings of H and P are to remain unchanged. Also, despite the increase in complexity in the host from example 24 to exaple 25, the number of possible productions remains the same; the parenthetical may appear either on the left or the right of the host utterance.

(26) Case 5



a. S= $\begin{Bmatrix} H = (\{A, B, C\}, \{(A, B), (A, C)\}, \{A\}) \\ P = (\{D, E, F\}, \{(D, E), (D, F)\}, \{D\}) \end{Bmatrix}$

b. i. LIN_H=⟨B, C⟩, $phon_H$=(B C)

ii. LIN_P=⟨E, F⟩, $phon_H$=(E F)

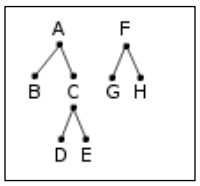
c. LIN=⟨B, C, E, F⟩, ⟨B, E, C, F⟩, ⟨B, E, F, C⟩, ⟨E, B, C, F⟩, ⟨E, B, F, C⟩, and ⟨E, F, B, C⟩

d. phon=(B C)(E F),(E F)(B C)

Example 26 shows that even though the number of elements in the parenthetical has increased from example 25, the number of possible productions remains two. This is because

there are only two phonological phrases, which means that there are only two orders that don't change the phonological phrasing, one p-phrase on either side of the other.

(27) Case 6



a. $S=\begin{Bmatrix} H = (\{A, B, C, D, E\}, \{(A, B), (A, C), (C, D), (C, E)\}, \{A\}) \\ P = (\{F, G, H\}, \{(F, G), (F, H)\}, \{F\}) \end{Bmatrix}$

b. i. LIN_H=⟨B, D, E⟩, $phon_H$=(B)(D E)

ii. LIN_P=⟨G, H⟩, $phon_H$=(G H)

c. LIN=⟨B, D, E, G, H⟩, ⟨B, D, G, E, H⟩, ⟨B, D, G, H, E⟩,…(ten possibilities)

d. phon=(B)(D E)(G H), (B)(G H)(D E), (G H)(B)(D E)

In 27, a more complex host structure which is associated with branching phonological phrasing results in more acceptable positions for a parenthetical structure. The parenthetical can be inserted on either side of the host, or between the phonological phrases (B) and (D E). This method of phonologically producing syntactically unintegrated structures means that the phonological form of a parenthetical structure can be inserted between any two phonological phrases of the host, which is consistent with the distribution of parentheticals.

4.1.2. Examples

This method of phonological production of syntactically unintegrated structures accurately predicts parenthetical topics' distribution. Emonds (1976) gives this example for instance, among others.

(28) a. They claimed John pushed a child into the street.[6]

b. John, they claimed, pushed a child into the street.

c. *John pushed, they claimed, a child into the street.

d. *John pushed a, they claimed, child into the street.

e. John pushed a child, they claimed, into the street.

f. *John pushed a child into, they claimed, the street.

[6] It is not possible for *they claimed* in 8a to be interpreted as a parenthetical, possibly because the information-structure-sensitive properties of comment clauses require their comment material to precede them in time.

g. *John pushed a child into the, they claimed, street.

h. John pushed a child into the street, they claimed.

Emonds uses examples like these as evidence for a syntactically integrated analysis which holds that parentheticals are acceptable when they are followed by a syntactic constituent. 28c,d,f,g are ungrammatical because the syntactic material following them is not a single syntactic constituent. This distribution appears to be shared by parenthetical topics as well.

(29) a. Speaking of unthinkable, John pushed a child into the street.

b. John, speaking of unthinkable, pushed a child into the street.

c. *John pushed, speaking of unthinkable, a child into the street.

d. *John pushed a, speaking of unthinkable, child into the street.

e. John pushed a child, speaking of unthinkable, into the street.

f. *John pushed a child into, speaking of unthinkable, the street.

g. *John pushed a child into the, speaking of unthinkable, street.

h. John pushed a child into the street, speaking of unthinkable.

This data is also consistent with an unintegrated analysis. The unacceptable utterances in 28 and 29 would be ruled out according to the phonological production procedure outlined above, because the host structure, *John pushed a child into the street*, would be phonologically structured as (John)(pushed a child)(into the street), which does not leave room for 28 and 29c,d,f,g, along the lines of 27 above. However, 28 and 29c,d,f,g do become acceptable when prosodic focus is introduced in the host structure, because the introduction of prosodic focus alters the phonological structure of the host. Consider 30 for example.

(30) a. John PUSHED, they claimed, a child into the street.

b. John pushed, speaking of unthinkable, a CHILD into the street.

Focus does not affect the syntactic structure of the host in a way which would make 28 and 29c,d,f,g acceptable according to an integrated analysis of parentheticals like Emonds's or others'. This is discussed in more detail below.

4.1.3. Parenthetical Continuity

One problem for the proposal outlined above is that it does not account for the fact that parenthetical phrases with complex phonological structure cannot be dispersed throughout the main sentence. The issue is that this proposal shuffles phonological phrases, so if a parenthetical is comprised of more than one phonological phrase, then those phrases should be able to be dispersed between different phonological phrases in the main sentence. For instance, a parenthetical like *the reporter claimed* is comprised of two phonological phrases. Some of the logical possibilities are listed in 31.

(31) a. (The reporter) (claimed) (John) (pushed a child) (into the street)
b. *(The reporter) (John) (claimed) (pushed a child) (into the street)
c. *(The reporter) (John) (pushed a child) (claimed) (into the street)
d. *(The reporter) (John) (pushed a child) (into the street) (claimed)

Even when the prosodic form of the parenthetical includes more than one phonological phrase, the parenthetical must always be continuous; the phonological phrases of the parenthetical cannot be dispersed between different phonological phrases in the host sentence. The shuffling proposal outlined in 4.1.1 above does not rule out possibilities like these. I do not propose a definitive solution to the problem here, but there are at least two possible ways to pursue a solution.

One way is to assume that the parenthetical can be distinguished from the main sentence, and that its prosodic form can be compacted together in some way, preventing its elements from being separated. The formalism of Reape (1993) includes a way of implementing this kind of procedure in HPSG. However, since the proposal of this thesis is not couched in HPSG, compaction would have to be integrated into a non-HPSG framework. Also, compacting the elements of the parenthetical together would require that the parenthetical be distinguished somehow from the main sentence. One strength of the proposal outlined in 4.1.1 is that it does not require that the parenthetical be distinguished in any way from the main sentence.

Another way to approach the problem of parenthetical continuity is intonation phrase restructuring. The proposal above centralizes the notion of *phonological phrase*, but there is another level of prosodic structure which could play a role, the *intonation phrase*. An intonation

phrase generally corresponds to the phonological content of a syntactic clause (Truckenbrodt, 2007), which means that parentheticals necessarily invoke restructuring at the level of the intonation phrase (Dehé, 2009). There is reason to believe that parentheticals do not always constitute a separate intonation phrase, and research suggests that intonation phrase restructuring may depend on more than just syntax; it can be influenced by speech rate and style, among other factors (Dehé, 2009). I would speculate that a more precise understanding of intonation phrase restructuring might lead to an explanation for why the parenthetical cannot be dispersed among prosodic constituents in the host sentence.

4.1.4. Summary

In section 4.1, I have described a proposal for deriving a phonological form including a linear order and prosodic structure from unintegrated syntactic configurations. This proposal involves deriving independent phonological forms for each tree in the unintegrated representation, and integrating the independent linear orders via sequence union. This accounts for the distribution of parentheticals in the main sentence. I do not provide an account for ruling out parentheticals interspersed throughout the main sentence, but I speculate that future research on intonation phrase restructuring concerning parentheticals may be able to provide some insight on the problem. In section 4.2, I present some observations on the interpretation of parenthetical topics, and conclude that parenthetical topics' interpretation is consistent with a syntactically unintegrated account that derives parentheticals' interpretation from non-syntactic principles.

4.2. Semantics/Interpretation

The semantic interpretation of linguistic utterances is generally described compositionally in terms of the tree-like syntactic representations of sentences. The case of syntactically unintegrated parentheticals seems to pose a problem for this approach, because there is no syntactic connection with which to compose the independent meanings of the parenthetical and its host.

However, not all sentences are interpreted in this way; often, sentences are interpreted based on discourse or utterance interpretation principles. For example, answers to questions are frequently "incomplete" sentences. That is, they may be single noun phrases, verbs missing certain valents, etc, but they still receive an interpretation, and still considered grammatical utterances in the context of a discourse. Pronouns for example frequently get their interpretation

from a salient discourse referent, even though there are well-attested principles for interpreting pronouns based on a *structural* relationship to an antecedent. In other words, a pronoun in one sentence can get an interpretation from a discourse referfent that appears in a separate, unconnected sentence.

In the case of parentheticals, the syntactic structure is that of unconnected trees, the same representation as unconnected, separate sentences. The interpretation therefore cannot use syntactic principles to determine the scope and the relation of the parenthetical with respect to the main sentence. Instead, general principles of discourse interpretation must be used to derive the semantic interpretation of the utterance. At first, it may seem bizarre that the semantic meaning of parentheticals is incorporated into the interpretation of the full utterance without being syntactically integrated with the host clause, but this proposal has been around since at least Haegeman (2009), and on closer consideration, the idea is not so unusual. If pronouns can be associated with an antecedent in an unconnected sentence, and sentence fragments can be interpreted as full answers to unconnected sentences, then it seems reasonable that parentheticals can be interpreted compositionally with an unconnected host sentence as well. For the purposes of this project, I assume that such principles exist and can be applied to the interpretation of parentheticals, without specifying what those principles might be, or how they might be instantiated.[7] I would speculate that these principles might be similar to those involved in interpreting paratactic constructions and morphological compounds, because those constructions are also subject to pragmatic considerations. Whatever principles are at play in interpreting constructions like those may also be at play in the interpretation of unintegrated parentheticals. In this section I examine a number of introspective judgments on the interpretation of sentences containing parenthetical topics, and present a general description of parenthetical topics' interpretation.

Clearly, parenthetical topics involve the notion of topic, and necessarily interact with focus (along the lines of 4.1.2). However, the way parenthetical topics get their interpretation is not straightforward, and the interpretation of parentheticals seems to depend heavily on contextual or pragmatic factors. The fact that parenthetical topics' interpretation depends on pragmatic considerations could be taken to support the hypothesis that parenthetical topics get

[7] One example is Asher (2000), which proposes that parentheticals generate independent discourse representations.

their interpretation from general discourse interpretation principles, rather than from a syntactic connection to the host sentence.

Parenthetical topics such as *speaking of* and *as for* identify a nominal element *x*, which serves the the topic for the host sentence. For example, in 32, the topic *x* is set off by brackets.

(32) a. As for [the electronics]^{x}, this store doesn't have them.
b. As for [the mistakes I mentioned]^{x}, they really were inevitable.
c. Speaking of [pets]^{x}, mine is a lizard.
d. Speaking of [idiots]^{x}, I'm visiting my cousins this weekend.
e. Speaking of [mistakes]^{x}, John did six problems.

It is usually simple to find the topic identified by the parenthetical topic; it is generally a nominal element syntactically integrated in the parenthetical. In other words, it is the NP that immediately follows *as for* or *speaking of*. However, the topic *x* identified by the parenthetical is also associated with an element *e* in the host sentence. In 33 below, *e* is set off by brackets.

(33) a. As for the electronics, this store doesn't have [them]^{e}.
b. As for the mistake I mentioned, [they]^{e} really were inevitable.
c. Speaking of pets, [mine]^{e} is a lizard.
d. Speaking of idiots, I'm visiting [my cousins]^{e} this weekend.
e. Speaking of mistakes, [John did six problems]^{e}.

The element *e* in the main sentence that the topic *x* of the parenthetical is identified with is not straightforward to identify. In 33a, *e* is the object NP of the main sentence verb. In 33b and c, *e* is the subject. In 33a, b, and c, *e* is a pronominal NP which necessarily draws its interpretation from discourse interpretation principles, but in 33d, *e* is the non-anaphoric NP *my cousins*. In 33e, *e* is the entire main sentence, giving the interpretation that it was a mistake for John to do six problems. The scope of *e* seems to depend on context, and on the content of the topic *x* identified by the parenthetical.

The compositional interpretation of the parenthetical topic with the host sentence also changes with the introduction of focus. In the following example for instance, the use of contrastive focus on *six* changes the interpretation of the parenthetical such that the interpretation

is that it was a mistake for John to six problems, as opposed to some other more appropriate number.

(34) a. Speaking of [mistakes]^{x}, [John did six problems]^{e}.
b. Speaking of [mistakes]^{x}, [John did SIX problems]^{e}.
c. Speaking of [mistakes]^{x}, [John did six PROBLEMS]^{e}.

According to Max Rooth's (1992) theory of focus interpretation, focused expressions are associated with two interpretations, an ordinary semantic value and a focus semantic value. The ordinary semantic value is the normal semantic value associated with the utterance without focus. The focus semantic value is a set of alternatives; essentially, it is the set of propositions with the form of the ordinary semantic value, but with alternatives for the semantics of the focused constituent. The precise theory of focus interpretation is not crucial to this analysis, but focus does change the interpretation, for instance in 34 above. In 34a, *mistakes* is associated with the entire main sentence, and the interpretation is that it was a mistake that John did six problems. It isn't necessarily the case that the number of problems that he did was a mistake, or that it was a mistake that he did problems instead of essays or something. In 34b and c though, the introduction of focus in the main sentence changes the interpretation. For instance, in 34b, it is the number of problems John did that is the mistake, perhaps five or seven problems would have been more appropriate.

In 34, focus does not change the scope of *e*, because the whole sentence was associated with the element *x* in the default case. However, for a sentence like 35a, in which *e* is not the full sentence by default, focus does change the scope of *e*.

(35) a. Speaking of [idiots]^{x}, I'm visiting [my cousins]^{e} this weekend.
b. Speaking of [idiots]^{x}, [I'M visiting my cousins this weekend]^{e}.

In 35a, *x=idiots* is associated with *my cousins*. However, the interpretation of 35b implies that the first person speaker is the idiot; perhaps the implication is that one would have to be an idiot to visit the speaker's cousins.

In the examples above, the nominal element *x* identified by the parenthetical is associated with the main sentence in a relation which is essentially "is." The interpretation of 35a for

instance includes the proposition “my cousins are idiots.” It’s often the case that the relation between *x* and *e* is just “is,” but the relation between *x* and *e* can actually change depending on the context, as in 36 below.

(36) Speaking of [corruption]^{x}, I’m meeting [a politician]^{e} later today.

In 36, *corruption* is associated with *a politician*, but the interpretation seems not to be “politicians *are* corruption,” but something more like “politicians *engage in* corruption.” The observation that the relation between the nominal element *x* identified by the parenthetical and the subpart *e* in this host can be determined contextually or pragmatically leads to the following description of parenthetical topic interpretation.

(37) *Parenthetical Topic Interpretation*: For a parenthetical topic containing a nominal element *x*, *x* is interpreted as being in a pragmatically determined relation *R* with a subpart *e* of the host sentence.

In the interpretation of parenthetical topics, *R* and *e* are contextually determined, as the examples above indicate. By default, *R* just means “is,” but that can change depending on the context, along the lines of 36. The scope of *e* seems to be determined largely by the content of the topic *x* in the parenthetical as in 33, but it can also change with the addition of focus as in 35. This is a purely descriptive hypothesis, which relies on the assumption that there are principles by which the content of *R* and the scope of *e* can be determined pragmatically. As for the task of developing a derivational explanation for the interpretation of parenthetical topics, I leave that to future research.

In section 2.2.2, examples from McCawley (1986) are cited which indicate that parentheticals are not interpreted under ellipsis. This could be taken as evidence that parentheticals are not syntactically integrated with the ellipsed material. However, the examples given by McCawley only use *speaker oriented* parentheticals, and when *subject oriented* parentheticals replace them, the sentences may become more acceptable (see footnote 6 in section 2.2.2). One might assert this as evidence that parentheticals are actually syntactically integrated, but that would only be true if ellipsis interpretation depended on syntactic constituency. In fact, it is plausible that ellipsis interpretation depends on pragmatic principles, not necessarily syntactic principles. One promising approach from this perspective is Culicover

& Jackendoff (2012), who suggest that ellipsis is mediated by pragmatic principles which mediate the matching of ellipsed material with extra material from an antecendent.

4.3. Ameliorating Focus

The proposal above for the phonological production of parentheticals predicts that a parenthetical can appear between any two phonological phrases in the main sentence. It happens to be the case that such phrases frequently line up with the main sentence's syntactic phrasing, which means that it often true that parentheticals do not break up local syntactic constituents. For example, in example 28 above (repeated here), the parenthetical topic *speaking of unthinkable* can appear between the subject NP and VP, but not in the middle of the VP constituent, between the verb and its object.

(28) a. Speaking of unthinkable, John pushed a child into the street.
b. John, speaking of unthinkable, pushed a child into the street.
c. *John pushed, speaking of unthinkable, a child into the street.
d. *John pushed a, speaking of unthinkable, child into the street.
e. John pushed a child, speaking of unthinkable, into the street.
f. *John pushed a child into, speaking of unthinkable, the street.
g. *John pushed a child into the, speaking of unthinkable, street.
h. John pushed a child into the street, speaking of unthinkable.

In this case, the phonological phrasing lines up with the syntactic phrasing. 38 below shows how the syntactic structure in 38a aligns with the prosodic structure in 38b.

(38) a. [$_{NP}$ John] [$_{VP}$ pushed a child] [$_{PP}$ into the street]
b. (John) (pushed a child) (into the street)

The parenthetical *speaking of unthinkable* is unacceptable when it appears in the middle of the phonological phrases of the main clause. For the examples above, that means *speaking of unthinkable* is acceptable between *John* and *pushed,* and between *child* and *into*. In this example, it is also true that it is unacceptable when it appears in the middle of *syntactic* phrases in the main clause. However, the proposal above predicts that the positional flexibility of parentheticals is determined by the prosodic structure, not the syntactic structure of the main sentence. There are cases in which phonological phrases do not match the syntactic phrasing, and if the

phonological phrasing happens to have phrase boundaries in the middle of a syntactic phrase, parentheticals should still be acceptable there. For example, prosodic focus can have the effect of placing phonological phrase boundaries in the middle of a syntactic phrase.

(39) a. [$_{NP}$ John] [$_{VP}$ pushed a CHILD] [$_{PP}$ into the street]
b. (John) (pushed) (a CHILD) (into the street)

For the sentence above, if syntactic structure determines the positions available for a parenthetical to appear in, then we should expect the distribution of the parenthetical *speaking of unthinkable* to remain the same in 39 as it is in 38. However, if the distribution is determined by the phonological phrasing, then we would expect the parenthetical *speaking of unthinkable* to be acceptable between the focused *a child* and the verb *pushed*. In fact, the latter is consistent with native speaker judgments.

(40) a. *John pushed, speaking of unthinkable, a child into the street.
b. John pushed, speaking of unthinkable, a CHILD into the street.

In fact, of the structural positions Emonds (1976) identifies as being unacceptable positions for parenthetical placement, most can be ameliorated in this way. The following examples illustrate how Emonds' judgments of unacceptability can be rectified simply by adding prosodic focus to a word in the sentence in a felicitous way.[8]

(41) a. *Linguists in France take, you know, Chomsky very seriously.
b. Linguists in France take, you know, CHOMSKY very seriously.

(42) a. *These claims will make, I have no doubt, many people very angry.
b. These claims will make, I have no doubt, MANY (as opposed to a few) people very angry.

(43) a. *He likes every, I believe, friend of John.
b. (He doesn't like every ENEMY of John) He likes every, I believe, FRIEND of John.

[8] Actually, Emonds (1976) acknowledges in a footnote on page 47 that the acceptability of some of the sentences he gave can be improved "if contrastive intonation appears in the constituent following the parenthetical," but he does not believe that that fact is significant to his analysis and thus does not pursue the idea. However, the observations I put forward here support the idea that the ameliorating effect of prosodic focus in these cases is a consistent and significant factor in the acceptability of parenthetical clauses.

There are examples identified by Emonds which cannot be ameliorated by the introduction of prosodic focus, but in my view it is plausible that independent prosodic factors, not syntactic ones, contribute to the unacceptability of those sentences. For instance, Emonds gives the following example.

(44) *Will, in your opinion, John come tomorrow?

44 does not seem to become acceptable with the introduction of prosodic focus. Neither focus on the constituent preceding the parenthetical nor on the constituent following it has the effect of increasing the utterance's acceptability.

(45) a. *WILL, in your opinion, John come tomorrow?
b. *Will, in your opinion, JOHN come tomorrow?

Another position in which focus does not seem to be able to increase acceptability is in the middle of a relativized prepositional phrase such as *of which*. When a parenthetical like *I think*, and certainly a parenthetical topic, is placed between the preposition and WH-word, neither focus on the preceding nor the following word increases the acceptability of the utterance.

(46) a. *Our business is extremely diligent as to our financial transactions, of, I think, which we keep four independent records.
b. *Our business is extremely diligent as to our financial transactions, OF, I think, which we keep four independent records.
c. *Our business is extremely diligent as to our financial transactions, of, I think, WHICH we keep four independent records.

Even though there are positions in which parentheticals cannot appear, even when prosodic focus is present on an adjacent constituent, that does not necessarily mean that those are syntactic restrictions on parentheticals' positional flexibility. Instead, it is possible that there are prosodic factors that contribute to the unacceptability of these utterances. For example, in the case of 46, it could be the case that *of* necessarily cliticizes to its complement *which*, which would mean that there would be a problem of phonological phrasing even in the cases with focus, as in 46b and 46c. There are certainly prosodic effects which can contribute to the

acceptability of examples like 45 and 46, but as this analysis takes a syntactic perspective, they cannot all be addressed here.

5. Experiment

The unintegrated hypothesis for the syntax of parentheticals outlined above makes the empirical prediction that sentences containing parentheticals will be more acceptable if prosodic focus is present adjacent to the parenthetical. Since this hypothesis makes an empirical prediction about acceptability of sentences containing parentheticals, we designed an experiment to test that prediction.

5.1. Methods

5.1.1. Participants

90 Participants were recruited through Amazon's Mechinical Turk online survey platform. Amazon's Mechanical Turk has been successfully used in other linguistic studies (e.g. Gibson et al. 2011; Sprouse et al. 2013) and allows for a quantitatively more rich pool of judgments compared to the traditional method of obtaining judgments through introspection. Participants were paid $1.20.

5.1.2. Materials

36 stimuli were created to test the prediction that focus adjacent to a parenthetical topic improves acceptability. The 36 stimuli were comprised of 12 sets of 3 lexically and syntactically identical sentences which varied only in focus placement. In other words, there were three conditions on each target sentence. These were *default* focus, focus to the *left* of the parenthetical, and focus to the *right* of the parenthetical. Each sentence was presented with a corresponding context intended to license the focus placement in the target sentence. All experimental stimuli are included in the attached appendix. One triple was based on the target sentence "he actually rode, speaking of surprises, the bicycle down the driveway," as in 47.

(47) a. DEFAULT: *Context*:
[Mary is telling a friend about her 6-year-old son, Daryl. "Daryl's birthday was yesterday. We got him a few small presents, but my parents surprised him with a bicycle. Actually, we were all surprised; he's never even ridden a bicycle before. Since he's never ridden a bicycle, when we took him outside to ride it …"]

Target Sentence:
We thought he wouldn't know how, but he actually rode, speaking of surprises, the bicycle down the DRIVEWAY.

b. LEFT: *Context*:
[Mary is telling a friend about her 6-year-old son, Daryl. "Daryl's birthday was yesterday. We got him a few small presents, but my parents surprised him with a bicycle. Actually, we were all surprised; he's never even ridden a bicycle before. Since he's never ridden a bicycle, when we took him outside to ride it…"]

Target Sentence:
We thought he would PUSH the bicycle down the driveway, but he actually RODE, speaking of surprises, the bicycle down the driveway.

c. RIGHT: *Context*:
[Mary is telling a friend about her 6-year-old son, Daryl. "Daryl's birthday was yesterday. We got him a few small presents, but my parents surprised him with a new skateboard and a bicycle. Actually, we were all surprised; he's never even ridden a bicycle before. Since he's never ridden a bicycle, when we took him outside to ride them…"]

Target Sentence:
We thought he would ride the SKATEBOARD down the driveway, but he actually rode, speaking of surprises, the BICYCLE down the driveway.

In each triple, the sentences differed only in the position of prosodic focus with respect to the parenthetical. In the example above for instance, focus appears in a position non-adjacent to the parenthetical, adjacent to the left of the parenthetical, and adjacent to the right of the parenthetical, as in 47a, b, and c respectively. Stimuli were presented with the word corresponding to the position intended to be focused capitalized. Though it is conceptually possible to create contexts that clearly place the focus in particular positions, and such was attempted with the contexts presented to participants in this study, there is also evidence that capitalization provides prosodic disambiguation of the sort intended in this experiment (Schafer et al., 2000).

In order to account for the possibility that the placement of focus in specialized positions might significantly affect acceptability, each sentence was presented in a context intended to license the focus placement. Even in the example with focus in a more default position not adjacent to the parenthetical, a context was presented to license the focus. Contexts were created with three factors in mind. Each context had to license the content of the main sentence, the

content of the parenthetical, and the focus in the main sentence. Within each triple, the part of the context intended to license the content of the main sentence and the parenthetical could remain the same for all three sentences. However, in order to license focus in different positions in the sentence, contexts within triples could be quite different from each other. The content of each sentence was arbitrary and was intended to be as natural as possible, and corresponding contexts were designed to license the three factors mentioned above for each sentence, the content of the main sentence, the content of the parenthetical, and the placement of prosodic focus.

5.1.3. Procedure

Each participant was presented with 12 target stimuli, four from each condition. There were three lists of 12 stimuli in pseudorandomized order. We also implemented copies of each list in reverse order for a total of 6 lists.

Participants were all presented with the same 8 fillers interspersed throughout the target items. The fillers were intended to be normal, natural utterances which could easily be expected to be scored highly. We wanted to include utterances which would be rated highly because we anticipated that most if not all of the target stimuli would receive relatively low scores, and we wanted participants to be presented with a balanced set of stimuli. The fillers were also used to exclude participants who gave outlier judgments.

Stimuli were judged for acceptability on a 6 point scale from “natural” to “unnatural.” We chose to use a 6 point scale instead of a 7-point scale in order to avoid the possibility of participants choosing the middle point as a default or “not sure” score. The 6-point scale forces participants to choose between the two ends of the scale.

Participants were also asked to answer several questions on language background. For instance, participants were asked whether they spoke American English natively, and those who did not were excluded from the analysis. They were also asked to provide their age and gender, though this data was not crucial to the analysis.

5.2. Analysis and Results

Of the 90 participants recruited, data from only 77 was used. 23 participants were excluded because they either i) did not consent in the online form, ii) indicated that they were not native speakers of *American English*, or iii) gave scores two standard deviations below the mean

response to the fillers. The mean scores for each condition were the following: the *default* condition was 2.83, the *focus-left* condition was 2.61, and the *focus-right* condition was 2.73. These figures show that overall the default condition was rated highest. The means for all three conditions were low; all three were below 3, but the mean score for the default condition was still slightly higher than the conditions with focus adjacent to the parenthetical.

An ordinal regression analysis was run on the scores of the 12 different items to identify effects of focus on acceptability. An ordinal mixed-effects model on response with by-participant and by-item random intercepts revealed significant differences between absence of focus and presence of focus adjacent to the parenthetical (β= -0.2734, *SE*= 0.1283, z= -2.131, p= 0.0331). Contrary to our prediction, responses were lower when focus was adjacent than when it was not adjacent to the parenthetical. We predicted that sentences with focus adjacent to the parenthetical would be predicted to have a higher response. The result of the analysis was the exact opposite of what was predicted; adjacent focus was found to significantly decrease acceptability.

In order to determine whether adjacent focus to the left and adjacent focus to the right differed significantly in their effect on response score, an ordinal regression analysis was run on a subset of response data including only the focus-left and focus-right conditions. An ordinal mixed-effects model on response with by-participant and by-item random intercepts did not identify significant differences between focus adjacent to the right and focus adjacent to the left of the parenthetical (β= 0.1865, *SE*= 0.1511, z= 1.234, p= 0.217). The result in this case was not significant; focus adjacent to the parenthetical brought responses down, and focus on the left had the same effect as focus on the right.

Since the stimuli contained two different parentheticals, *speaking of* and *as for,* we also analyzed subsets of the data containing each parenthetical type separately. The mean scores for each focus condition for *speaking of* and *as for* are shown in the table below.

(Tbl. 1)

	Speaking of	As for
DEFAULT	3.05	2.61
LEFT	2.76	2.46
RIGHT	2.80	2.66

The table above shows the mean scores for *speaking of*. Though overall all three conditions were slightly higher than the combined *speaking of* and *as for*, the default condition was still the highest condition. An ordinal mixed-effects model on response with by-participant and by-item random intercepts revealed that there were significant differences between absence and presence of focus adjacent to the parenthetical in the *speaking of*-only data (β= -0.4907, *SE*= 0.1829, z= -2.683, p= 0.0073). This result is consistent with the combined *speaking of* and *as for* analysis, which showed the same effect; focus adjacent to the parenthetical led to significantly lower responses than when focus was not adjacent to the parenthetical.

The mean scores by condition for the *as for*-only data were different than the *speaking of* means. As the table above shows, these responses were overall slightly lower than the combined case, and in the case of *as for*, the focus-right condition is slightly higher than both the default and focus-left conditions, though focus-left was still lower than default. For the *as for*-only data, an ordinal mixed-effects model on response with by-participant and by-item random intercepts indicated that there were *not* significant differences between absence and presence of focus adjacent to the parenthetical (β= -0.1347, *SE*= 0.1870, z= -0.72, p = 0.471). This result indicates that, in the *as for*-only data, focus placement with respect to the parenthetical did not have a significant effect on acceptability. While focus adjacent to the parenthetical brought responses down in the combined case and the *speaking of*-only case, this effect was not present in the *as for*-only data.

5.3. Discussion

The results of this experiment do not support the hypothesis described above. The results of this experiment do not accord with judgments obtained informally. However, there are a number of factors that may have affected results, which unfortunately means that the results of this experiment cannot be used to exclude an unintegrated approach to the syntax of parenthetical topics in English. One factor that may have affected the results of this experiment is the fact that

the stimuli were presented in *orthographic* form, but the effect of ameliorating focus is a feature of *phonetic* form. It is plausible that, despite our attempts to unambiguously induce a reading which included information-structural (specifically contrastive) focus in target stimuli, the prosodic effect did not carry over in the orthographic presentation. Introspective and informal judgments obtained over the course of this project strongly suggest that prosodic focus plays a significant role in the acceptability of sentences containing parentheticals, an effect which these results contradict. A logical next step in pursuing this hypothesis experimentally would be to replicate this experiment with phonetic instead of orthographic stimuli, and see whether the change yields results that accord with judgments obtained informally.

Besides the fact that focus adjacent to the parenthetical significantly decreased acceptability in this experiment, the difference in effect between the two parentheticals used, *speaking of* and *as for* was also surprising. We did not predict a difference between the two parentheticals, yet focus had a significant effect only in the *speaking of* examples. There was no significant effect of focus in the examples with *as for*. This could be due to frequency of use. *As for* seems to be somewhat more formal than *speaking of*. That difference could mean that *as for* appears less frequently in natural language use, which might be a factor in the lack of focus effects with the *as for* stimuli.

Another factor which could have affected the results of this experiment is the context of the experiment itself. I would speculate that parentheticals have very particular contextual requirements which may not be possible to convey through an acceptability judgment task. When parentheticals appear in medial positions, it seems that they often do so because of a deliberate decision by the speaker, for instance, to withhold or reveal certain information up to a particular point. Another possibility is that a speaker might place a parenthetical in a medial position because they feel that is the best place for the parenthetical to trigger some relation to the preceding or following information. A parenthetical could even appear in a medial position because it just so happened that that was when the speaker remembered or decided to say certain information which has no syntactic connection to the main sentence. The context of an acceptability judgment survey may exclude subtleties like this.

6. Conclusion

I have reviewed some of the syntactic properties of parentheticals and some of the proposals intended to account for them. After reviewing the evidence, an approach which treats parentheticals as syntactically unintegrated constituents seems to most adequately account for the data in theory. I have proposed that the unintegrated approach predicts that prosodic focus can increase the acceptability of parentheticals that intervene in a phonological phrase, which is consistent with introspective judgments. An acceptability judgment survey conducted online through Amazon's Mechanical Turk survey service did not yield results in support of the unintegrated proposal, but it is plausible that factors in the design of the experiment contributed to that result. Future research on this topic should aim to replicate this experiment using phonetic stimuli, as well as to closely examine the effect of prosodic focus on acceptability with other kinds of parentheticals such as full clausal parentheticals. A closer analysis of the interpretation of parenthetical topics is warranted also, and, ultimately, attempts to generalize the unintegrated hypothesis cross-linguistically should be made.

References

AnderBois, S., Brasoveanu, A., & Henderson, R. (2013). At-issue proposals and appositive impositions in discourse. *Journal of Semantics* 32(1), 1-30.

Arnold, D. (2007). Non-restrictive relatives are not orphans. *Journal of Linguistics,* 43(2), 271-309.

Asher, N. (2000). Truth conditional discourse semantics for parentheticals.*Journal of Semantics*, 17(1), 31-50.

Burton-Roberts, N. (1999). Language, linear precedence and parentheticals. *The Clause in English,* ed. Peter Collings and David Lee, 45, 33-51.

Culicover, P. W., & Jackendoff, R. (2012). Same-except: A domain-general cognitive relation and how language expresses it. *Language*, *88*(2), 305-340.

Daniels, M. W. (2005). *Generalized ID/LP Grammar: A Formalism for Parsing Linearization-Based HPSG Grammars*. Doctoral dissertation, The Ohio State University.

Dehé, N., & Kavalova, Y. (Eds.). (2007). Parentheticals: an Introduction. *Parentheticals*, 1-24. John Benjamins Publishing.

Dehé, N. (2009). Clausal Parentheticals, Intonational Phrasing, and Prosodic Theory. *Journal of Linguistics* 45(3), 569-615.

De Vries, M. (2007). Invisible Constituents? Parentheses as B-Merged Adverbial Phrases. Parentheticals, ed. Nicole Dehé and Yordanka Kavalova, 203-234.

Emonds, J. E. (1976). *A Transformational Approach to English Syntax: Root, Structure-Preserving, and Local Transformations*. Academic Press Inc.

Gibson, E., Piantadosi, S., & Fedorenko, K. (2011). Using Mechanical Turk to Obtain and Analyze English Acceptability Judgments. *Language and Linguistics Compass*, 5(8), 509-524.

Gundel, J. M. (1974). *The role of topic and comment in linguistic theory*. University of Texas at Austin.

Haegeman, L. (2009). Parenthetical adverbials: The radical orphanage approach. *Dislocated Elements in Discourse: Semantic, Syntactic, and Pragmatic Perspectives*, ed. Benjamin Shaer, 331-347. Routledge.

Jackendoff, R. (1972). *Semantic Interpretation in Generative Grammar,* Cambridge, MA: Mit Press.

Kaltenböck, G. (2007). Spoken parenthetical clauses in English. *Parentheticals*, ed. Nicole Dehé and Yordanka Kavalova, 25-52.

Kayne, R. (1994). *The antisymmetry of syntax,* Cambridge MA: Mit Press.

McCawley, J. D. (1982). Parentheticals and discontinuous constituent structure. *Linguistic Inquiry*, 13(1), 91-106.

Meinunger, A. (2000). *Syntactic aspects of topic and comment* (Vol. 38). John Benjamins Publishing.

Nichols, J., & Warnow, T. 2008. Tutorial on Computational Linguistic Phylogeny. *Language and Linguistics Compass* 2(5): 760-820.

Peterson, P. (1999). On the boundaries of syntax. *The Clause in English* ed. Peter Collings and David Lee, 45, 229-250.

Reape, M. (1993). *A Formal Theory of Word Order: a Case Study in West Germanic*. Doctoral dissertation, University of Edinburgh.

Rizzi, L. (2004). On the cartography of syntactic structures. *The structure of CP and IP: The cartography of syntactic structures*, 2, 3-15.

Roberts, C. (2011) Topics. In press in Claudia Maienborn, Klaus von Heusinger & Paul Portner (eds.) *Semantics: An International Handbook of Natural Language Meaning*. Mouton de Gruyter.

Rooth, M. (1992). A Theory of Focus Interpretation. *Natural Language Semantics* 1(1), 75-116.

Sprouse, J, Carson T. S, & Almeida D. (2013) A Comparison of Informal and Formal Acceptability Judgments Using a Random Sample from Linguistic Inquiry 2001-2010. *Lingua* 134:219–248.

Truckenbrodt, H. (1999). On the Relation between Syntactic Phrases and Phonological Phrases. *Linguistic Inquiry* 30(2), 219-255.

Truckenbrodt, H. (2007). The Syntax-Phonology Interface. *The Cambridge Handbook of Phonology*, 2007, 435-456.

Appendix

Experimental Stimuli

AS FOR

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1. DEFAULT

Context: [A kid named John is outside playing with some red, green, and blue basketballs and soccer balls. He decides to lob some of the green soccer balls over a nearby bush, and he was also going to kick them over a car parked nearby on the street, but he wisely changed his mind. Instead…]

Sentence: He only kicked, as for the soccer balls, the green ones over the BUSH.

1. CONTRASTIVE LEFT

Context: [A kid named John is outside playing with some red, green, and blue basketballs and soccer balls. He decides he wants to lob some of the red and green balls over a nearby bush.]

Sentence: John THREW the green basketballs over the bush, but he only KICKED, as for the soccer balls, the green ones over the bush.

1. CONTRASTIVE RIGHT

Context: [A kid named John is outside playing with some red, green, and blue basketballs and soccer balls. He decides he wants to lob some of the balls over a nearby bush.]

Sentence: John kicked the red and BLUE basketballs over the bush, but he only kicked, as for the soccer balls, the GREEN ones over the bush.

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2. DEFAULT

Context: [Alan is at the farmer's market to pick up some quality, inexpensive fruits and vegetables. One vendor has a great deal: 25% off on vegetables as long as you buy at least one fruit and at least one vegetable. Alan takes some time to decide which fruits and vegetables he wants, and how many he wants to buy. He eventually decides to buy two watermelons and two eggplants.]

Sentence: Alan bought two watermelons and two, as for the vegetables, eggplants at twenty-five percent off.

2. CONTRASTIVE LEFT

Context: [Alan is at the farmer's market to pick up some quality, inexpensive fruits and vegetables. One vendor has a great deal: 25% off as long as you buy at least one fruit and at least one vegetable. Alan decides to buy watermelons as his fruits and eggplants as his vegetables, but he takes some time to decide how many he wants to buy. The vendor suggested that he buy four watermelons and three eggplants at 25% off, but instead…]

Sentence: Alan bought THREE watermelons, and TWO, as for the vegetables, eggplants at twenty-five percent off.

2. CONTRASTIVE RIGHT

Context: [Alan is at the farmer's market to pick up some quality, inexpensive fruits and vegetables. One vendor has a great deal: half price as long as you buy at least one fruit and at least one vegetable. Alan takes some time to decide which fruits and vegetables he wants, and how many he wants to buy. The vendor suggested that he buy two cantaloupes and two

cucumbers at 25% off, but instead…]
Sentence: Alan bought two WATERMELONS, and two, as for the vegetables, EGGPLANTS at twenty-five percent off.

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3. DEFAULT
Context: [Mary is a professional visiting a convention. At the event, there are many groups to speak with, including groups of salespeople, programmers, designers, and even physicists.]
Sentence: Mary spoke with the salespeople for twenty minutes, and she spoke with, as for the others, the physicists for an HOUR.

3. CONTRASTIVE LEFT*
Context: [Mary is a professional visiting a convention. At the event, there are many groups to speak with, including groups of salespeople, programmers, designers, and even physicists. Since Mary's professional interests are somewhat obscure, she thought she wouldn't be able to find anyone to talk to, so she was surprised to have interesting conversations with the salespeople, and with some of the others, specifically the physicists.]
Sentence: Mary argued with the salespeople, and she SPOKE, as for the others, with the physicists for an hour.

3. CONTRASIVE RIGHT
Context: [Mary is a professional visiting a convention. At the event, there are many groups to speak with, including groups of salespeople, programmers, designers, and even physicists. At first, she thought she would speak with the salespeople for an hour, and with some of the others, specifically the physicists, for twenty minutes. However, she had a change of plans.]
Sentence: Mary spoke with the SALESPEOPLE for twenty minutes, and she spoke with, as for the others, the PHYSICISTS for an hour.

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4. DEFAULT
Context: [Susan is an old woman who rides the bus to work every day. One day, Susan meets a nice couple, John and Mary, on the ride to work. Susan notices that they seem to have European accents, and when she asks them where they're from, they both say they are German. Susan is a little confused because she could have sworn John had a French accent.]
Sentence: Susan has no trouble believing that Mary is from GERMANY, and she believes that, as for John, he is from FRANCE.

4. CONTRASTIVE LEFT*
Context: [Susan is an old woman who rides the bus to work every day. One day, Susan meets a nice couple, John and Mary, on the ride to work. Susan notices that they seem to have European accents, and when she asks them where they're from, they both say they are German. Susan is a little confused because she could have sworn John had a French accent, and she thought Mary's accent was Danish, though she wouldn't have a hard time believing Mary's accent was German.]
Sentence: Susan SUSPECTS that Mary is from Denmark, but she's CONVINCED, as for John, that he is from France.

4. CONTRASTIVE RIGHT
Context: [Susan is an old woman who rides the bus to work every day. One day, Susan meets a nice couple, John and Mary, on the ride to work. Susan notices that they seem to have European accents, and when she asks them where they're from, they both say they are German. Susan is a little confused because she could have sworn John had a French accent.]
Sentence: Susan has no trouble believing that MARY is from Germany, but she's convinced that, as for John, HE is from France.

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5. DEFAULT
Context: [As election season continues, presidential candidates are giving dozens of speeches and airing hundreds of television advertisements all across the country. When one Democratic candidate gave a speech in a small town, in order to provide critical commentary, a local newspaper hired a group of Republican journalists to review the speech in the Sunday paper. In order to provide unbiased commentary, they also hired a group of Democrats to review a popular Republican candidate's most recent television advertisement.]
Sentence: One of the Democrats criticized the ADVERTISEMENT, and one journalist, as for the Republicans, criticized the SPEECH.

5. CONTRASTIVE LEFT
Context: [As election season continues, presidential candidates are giving dozens of speeches all across the country. When one candidate gave a speech in a small town, in order to provide unbiased commentary, a local newspaper hired a group of Democrat editors and a group of Republican journalists to review the speech in the Sunday paper.]
Sentence: The paper thought that one of the Democrat EDITORS would criticize the speech, but really one JOURNALIST, as for the Republicans, criticized the speech.

5. CONTRASTIVE RIGHT
Context: [As election season continues, presidential candidates are giving dozens of speeches all across the country. When one third-party candidate gave a speech in a small town, in order to provide unbiased commentary, a local newspaper hired a group of Democrat editors and a group of Republican journalists to review the speech in the Sunday paper. The paper thought that both sides would give a neutral review of the speech, but…]
Sentence: All of the Democrats PRAISED the speech, and one journalist, as for the Republicans, CRITICIZED the speech.

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6. DEFAULT
Context: [Pam recently retired from her job in Columbus, so she planned to travel to a couple interesting cities. She planned two trips, one to New York and one to Philadelphia. She planned to drive to New York in November and to Philadelphia in December. The first trip went according to plan. However…]
Sentence: She actually drove, as for the second trip, to Philadelphia in JANUARY.

6. CONTRASTIVE LEFT
Context: [Pam recently retired from her job in Columbus, so she planned to travel to a couple interesting cities. She planned two trips, one to New York and one to Philadelphia. She planned to fly to New York in December and to fly to Philadelphia in January. The first

trip went according to plan. However…]
Sentence: She actually DROVE, as for the second trip, to Philadelphia in January.

6. CONTRASTIVE RIGHT
Context: [Pam recently retired from her job in Columbus, so she planned to travel to a couple interesting cities. She planned two trips, one to New York and one to Boston. She planned to drive to New York in December and then drive to Boston in January. The first trip went according to plan. However…]
Sentence: She actually drove, as for the second trip, to PHILADELPHIA in January.

SPEAKING OF

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7. DEFAULT
Context: [David is an entry-level employee at a bank. One of David's co-workers, Adam, feels strongly about his fellow employees' food choices. The bank recently distributed free lunch vouchers to employees to be used at their discretion. One day at work, Adam informs David about the reasons he believes fast food should be avoided. After he finishes explaining his position on fast food, he asks David if he already used his free lunch voucher. David replies, "Yes, I did…"]
Sentence: "I bought, speaking of fast food, a hamburger on Tuesday."

7. CONTRASTIVE LEFT
Context: [David is an entry-level employee at a bank. One of David's co-workers, Adam, feels strongly about his fellow employees' food choices. The bank recently distributed free lunch vouchers to employees to be used at their discretion. One day at work, Adam informs David about the reasons he believes fast food should be avoided. After he finishes explaining his position on fast food, he asks David if he used his free lunch voucher yet. David says "Yes, I actually got a hamburger on Tuesday." But Adam misheard him, "You're saying you sold fast food on Tuesday? How do you have time when you work full time here at the bank?" "No, I said…"]
Sentence: "I BOUGHT, speaking of fast food, a hamburger on Tuesday."

7. CONTRASTIVE RIGHT
Context: [David is an entry-level employee at a bank. One of David's co-workers, Adam, feels strongly about his fellow employees' food choices. Last Tuesday was the bank's official free lunch day, where lunch vouchers were provided to employees. One day at work, Adam informs David about the reasons he believes fast food should be avoided. After he finishes explaining his position on fast food, he asks David what he had for lunch on free lunch day. David replies, "I was going to buy a salad for lunch, but I was short on time, so…"]
Sentence: "I bought, speaking of fast food, a HAMBURGER on Tuesday."

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8. DEFAULT
Context: [Mary is telling a friend about her 6-year-old son, Daryl. "Daryl's birthday was yesterday. We got him a few small presents, but my parents surprised him with a bicycle. Actually, we were all surprised; he's never even ridden a bicycle before. Since he's never ridden a bicycle, when we took him outside to ride it…"]

Sentence: "We thought he wouldn't know how, but he actually rode, speaking of surprises, the bicycle down the driveway."

8. CONTRASTIVE LEFT
Context: [Mary is telling a friend about her 6-year-old son, Daryl. "Daryl's birthday was yesterday. We got him a few small presents, but my parents surprised him with a bicycle. Actually, we were all surprised; he's never even ridden a bicycle before. Since he's never ridden a bicycle, when we took him outside to ride it…"]
Sentence: "We thought he would PUSH the bicycle down the driveway, but he actually RODE, speaking of surprises, the bicycle down the driveway."

8. CONTRASTIVE RIGHT
Context: [Mary is telling a friend about her 6-year-old son, Daryl. "Daryl's birthday was yesterday. We got him a few small presents, but my parents surprised him with a new skateboard and a bicycle. Actually, we were all surprised; he's never even ridden a bicycle before. Since he's never ridden a bicycle, when we took him outside to ride them…"]
Sentence: "We thought he would ride the SKATEBOARD down the driveway, but he actually rode, speaking of surprises, the BICYCLE down the driveway."

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9. DEFAULT
Context: [Jane is telling her friend about a mutual friend named Anne. "Anne started teaching History and English at the local community college. Anne told me she got bad grades when she was a student. Part of her job is to be optimistic about her students, so she may deny this, but…"]
Sentence: "She believes that, speaking of bad grades, no one will get an A in history class."

9. CONTRASTIVE LEFT*
Context: [Jane is telling her friend about a mutual friend named Anne. "Anne started teaching History and English at the local community college. Anne told me she got bad grades when she was a student. Part of her job is to be optimistic about her students, so she may not ADMIT this, but…]
Sentence: "She BELIEVES, speaking of bad grades, that no one will get an A in history class."

9. CONTRASTIVE RIGHT
Context: [Jane is telling her friend about a mutual friend named Anne. "Anne started teaching History and English at the local community college. Anne told me she got bad grades when she was a student. She might have been instructed to believe that EVERYONE will get an A in history class, but…"]
Sentence: "She believes that, speaking of bad grades, NO ONE will get an A in history class."

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10. DEFAULT
Context: [A student is telling a friend about a documentary he saw on TV. "The film was about dedication," he says, "it featured people from two different walks of life, a lawyer and an athlete, and the dedication it took to be successful. The takeaway from the film was that it takes a lot of dedication to be successful in anything…"]
Sentence: "The athlete, speaking of dedication, trained for 30 hours a week."

10. CONTRASTIVE LEFT
Context: [A student is telling a friend about a documentary he saw on TV. "The film was about dedication," he says, "it featured people from two different walks of life, a lawyer and an athlete, and the dedication it took to be successful. The takeaway from the film was that it takes a lot of dedication to be successful in anything. The lawyer had to go to law school for four years; he said he also trained for 30 hours a week." "Did you say the athlete trained for 30 hours a week? Wow, that's dedication." "No, no, no…"]
Sentence: "The LAWYER, speaking of dedication, trained for 30 hours a week."

10. CONTRASTIVE RIGHT
Context: [A student is telling a friend about a documentary he saw on TV. "The film was about dedication," he says, "it featured people from two different walks of life, a lawyer and an athlete, and the dedication it took to be successful. The takeaway from the film was that it takes a lot of dedication to be successful in anything. The lawyer had to go to law school. The athlete trained constantly for four years, and he also studied for 30 hours a week." "Did you say the athlete trained for 30 hours a week? Wow, that's dedication." "No, no, no…"]
Sentence: "The athlete, speaking of dedication, STUDIED for 30 hours a week."

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11. DEFAULT
Context: [In today's economic climate, innovation is key. In a recent startup, a hardware company hired a team of engineers to open up a line of technology products. The company administrators believed that this technological innovation would be essential to their company's future.]
Sentence: The engineers developed, speaking of innovation, a cellphone for the company.

11. CONTRASTIVE LEFT
Context: [In today's economic climate, innovation is key. In a recent startup, a hardware company hired a team of engineers to open up a line of technology products. The company administrators believed that technological innovation would be essential to their company's future. The engineers were told to come up with some innovations for a new cellphone. Instead…]
Sentence: The engineers DEVELOPED, speaking of innovation, a cellphone for the company.

11. CONTRASTIVE RIGHT
Context: [In today's economic climate, innovation is key. In a recent startup, a hardware company hired a team of engineers to open up a line of technology products. The company administrators believed that technological innovation would be essential to their company's future. The engineers were told to develop a laptop for the company. Instead…]
Sentence: The engineers developed, speaking of innovation, a CELLPHONE for the company.

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12. DEFAULT
Context: [A student named Alfred is in the library talking to a librarian about his history project. "I'm starting to think it was a mistake to take this class. I have a huge project due soon and I'm totally lost." "I'm sorry to hear this class was a mistake for you. Which book did you want?" Alfred points to a book on the counter…]
Sentence: "I wanted that, speaking of mistakes, book about the French Revolution."

12. CONTRASTIVE LEFT
Context: [A student named Alfred is in the library talking to a librarian about his history project. "I'm starting to think it was a mistake to take this class. I have a huge project due soon and I'm totally lost." "I'm sorry to hear this class was a mistake for you." The librarian points to a book on the counter, "Did you want this book about the French Revolution?" Alfred points to a different book…]
Sentence: "No, I wanted THAT, speaking of mistakes, book about the French Revolution."

12. CONTRASTIVE RIGHT
Context: [A student named Alfred is in the library talking to a librarian about his history project. "I'm starting to think it was a mistake to take this class. I have a huge project due soon and I'm totally lost." "I'm sorry to hear this class was a mistake for you." The librarian points to a magazine on the counter, "Did you want this magazine about the French Revolution?" Alfred points to a nearby book…]
Sentence: "No, I wanted that, speaking of mistakes, BOOK about the French Revolution."

===

FILLERS

1.
Context: [John is a farmer who enjoys giving his cows interesting names. He named one Democritus, another one Anaxagoras, and another one Leonardo. Not too long ago, he acquired another cow, and he had to give her a new name. This time, however, he thought that he would go with a more normal name.]
Sentence: John named the new cow Betsy.

2.
Context: [Tom is a student at a small community college in Wyoming. It's the end of his second year, which means he has to choose a major. Tom is very indecisive, so the decision is difficult for him. He ends up officially becoming a psychology major, but the very next day he changes his major to history.]
Sentence: Technically, John was a psychology major for one day.

3.
Context: [Martha works in a bank. She doesn't like her job very much these days. Unfortunately, the bank has been hit by hard times, and Martha's pay has been cut. This is very unfortunate for Martha, considering the fact that she has seven children and 26 cats to care for all by herself. Martha digs into the depths of her spirit to find the strength to persevere, and she is struck by inspiration; she has to quit her job at the bank and pursue her childhood dream of playing ping-pong professionally.]
Sentence: Martha became a successful ping-pong champion.

4.
Context: [One day, a toddler named Marcy was in pre-school playing with some letter blocks. She didn't know what letters were yet, but the multicolored shapes on the blocks were certainly interesting to look at and arrange in different patterns. Next thing Marcy knew, she was thinking about candy. From what she could remember, the teacher had stowed the bag of sweets away in the top drawer on the cabinet, but Marcy thought she could reach it if she built a tower of blocks. When she tried to climb the blocks though, they all

came tumbling down like a miniature Tower of Babel.]
Sentence: Marcy's blocks all fell down.

5.
Context: [A mechanic named Alan got a call last weekend from an old friend from high school named Arnold asking for a discount. Alan had never given discounts before, even to family members, but for some reason, he didn't want to disappoint his old friend. He offered him a 10% discount, and Arnold seemed happy with the deal. Arnold showed up at the shop on Monday with a sputtering, rusty old minivan, and only paid $20 up front, though he assured Alan he'd pay the rest when he came to pick the car back up.]
Sentence: However, Arnold never came back to pick up the fixed car, and he never paid Alan the rest of the fee.

6.
Context: [James and Elizabeth are trying to decided what movie they want to see over the weekend. James suggests that they go to a new action film on Saturday, but Elizabeth isn't interested. He the asks if she would want to go see the a new dramatic film on Friday. Elizabeth replies…]
Sentence: "No, I would rather see the new comedy on Friday."

7.
Context: [Badgers actually aren't rodents, they're mustelids, the family of mammals that includes skunks, wolverines, and weasels. There are many different kinds of badgers, including American badgers, European badgers, honey badgers, and more. American badgers are smaller than their European and African counterparts, but they're not nearly as small as the Asian ferret badgers native to Southeast Asia.]
Sentence: Ferret badgers are the smallest kind of badger.

8.
Context: [Roger was an artist whose passion was painting trees. He painted different kinds of trees every day, and he eventually became the world's foremost tree painter. At one point, he was getting commissioned for 5 tree paintings a month. One sunny day in June, Roger got a call from a wealthy tree enthusiast offering over a million dollars for a series of six tree paintings. Of course, Roger was overjoyed, and he got straight to work.]
Sentence: Roger painted all six trees in one day.